AFWAL-TR-82-4063 VOLUME VI

STATE ARONAUTICAL LABORATURE

AD-A143 072

INTEGRATED COMPUTER-AIDED MANUFACTURING (ICAM)
ARCHITECTURE PART III

VOLUME VI - COMPOSITE INFORMATION MODEL OF
"MANUFACTURE PRODUCT" (MFG1)

SofTech, Inc. 460 Totten Pond Road Waltham, MA 02154

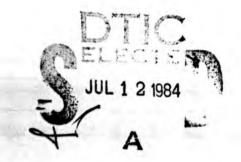
September 1983

Final Report for September 1980 - October 1982

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

FILE COPY

MATERIALS LABORATORY
AIR FORCE WRIGHT AERONAUTICAL LABORATORIES
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433



84 07 10 06

NOTICES

When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

This report has been reviewed by the Office of Public Affairs (ASD/PA) and is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nations.

This technical report has been reviewed and is approved for publication.

RICHARD R. PRESTON.

Project Manager

Computer Integrated Manufacturing Branch

Manufacturing Technology Division

FOR THE COMMANDER

216 Tupper NATHAN G. TUPPER

Chief

Computer Integrated Manufacturing Branch

Manufacturing Technology Division

"If your address has changed, if you wish to be removed from our mailing list, or if the addressee is no longer employed by your organization, please notify AFWAL/MLTC, Wright-Patterson AFB, Ohio 45433 to help us maintain a current mailing list."

Approval Date

Copies of this report should not be returned unless return is required by security considerations, contractual obligations, or notice on a specific document.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE When Data Friend

| | DEFORE COMPLETING FORM | |
|---|---|--|
| AFWAL-TR-82-4063 Volume VI AD- A14307: | 2 FTR110410000U | |
| INTEGRATED COMPUTER-AIDED MANUFACTUR- | Final - September 1980 through October 1982 | |
| Composite Information Model of "Manufacture Product" (MFG1) | 6 PERFORMING DIS REPORT NUMBER 1080-35 | |
| C. Martin, DACOM S. Smith, SofTech A. Nowlin, DACOM T. Ruegsegger, SofTech W. St. John, SofTech A. Small, Downey & Small | F33615-80-C-5109 | |
| SofTech, Inc. 460 Totten Pond Road Waltham, MA 02154 | P.E. 78011F Project Priority 1104 | |
| Materials Laboratory (AFWAL/MLTC) | September 1983 | |
| AF Wright Aeronautical Laboratories (AFSC) | 13 NUMBER OF PAGES | |
| Wright-Patterson AFB, OH 45433 | 316 15. SECURITY CLASS, of this report, | |
| Materials Laboratory (AFWAL/MLTC) AF Wright Aeronautical Laboratories (AFSC) | UNCLASSIFIED | |
| Wright-Patterson AFB, OH 45433 | 15. DECLASSIFICATION DOWNGRADING | |
| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, If different | (rom Report) | |
| | | |
| 8. SUPPLEMENTARY NOTES | | |
| 9. KEY WORDS (Continue on reverse side if necessary and identify by block number Manufacturing Architecture ICAM Model of Manufacturing IDEF Integrated Computer-Aided Manufacturing MFG Subsystem Integration DESI Technology Transfer | MFG1 MFG01 Glossary GN0 | |
| 9. KEY WORDS (Continue on reverse side if necessary and identify by block number Manufacturing Architecture ICAM Model of Manufacturing IDEF Integrated Computer-Aided Manufacturing MFG(| MFG1 MFG01 Glossary GN0 GN1 CAM) Architecture Part III manufacturing architecture | |

SECURITY CLASSIFICATION OF THIS PAGE When Data Entered

This report is presented in the following eight volumes:

- 1. Volume I Architecture Part III Accomplishments
- 2. Volume II Procedures
- 3. Volume III Composite Function Model of "Design Product" (DES0)
- 4. Volume IV Composite Information Model of "Design Product" (DES1)
- Volume V Composite Function Model of "Manufacture Product" (MFG0)
 Volume VI Composite Information Model of "Manufacture Product" (MFG1)
 Volume VII MFG01 Glossary
 Volume VIII Technology Transfer

FOREWORD

This technical report provides the results of the Information Modeling Task associated with the "Manufacture Product" Model. This work was performed under U.S. Air Force Contract #F33615-80-C-5109, "ICAM APCHITECTURE, PART III", covering the period of September 1980 through October 1982. The contract was sponsored by the Computer Integrated Manufacturing Branch, Materials Laboratory, Air Force Wright Aeronautical Laboratories, Air Force Systems Command, Wright Patterson Air Force Base, Ohio 45433. The Air Force Technical Manager for ICAM ARCHITECTURE PART III was Capt Steve R. LeClair for the basic contract and Capt Richard R. Preston for the option phase.

Bette Davis was the SofTech Program Manager. The other contributors to this document are as follows:

- C. Martin, DACOM
- A. Nowlin, DACOM
- W. St. John, SofTech
- S. Smith, SofTech
- T. Ruegsegger, SofTech
- A. Small, Downey & Small

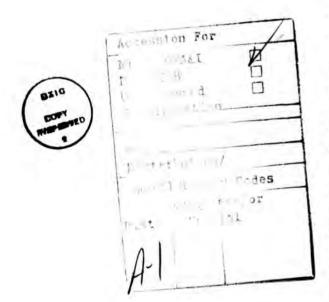


TABLE OF CONTENTS Composite Information Model Development and Enhancement

| Section | | | Page | |
|---------|-------|---|---------------|--|
| 1 | SCOPE | | 1-1 | |
| | 1.1 | Identification | 1-1 | |
| | 1.2 | Background | 1-1 | |
| | 1.3 | Functional Description of Document | 1-5 | |
| 2 | REQUI | REQUIREMENTS | | |
| | 2.1 | Development of the Composite Information Model | 2-1 | |
| | 2.2 | Entity Class Name Cross Reference Use | 2 - 35 | |
| | 2.3 | Related Entity Class Node Cross Reference | 2-55 | |
| | 2.4 | 5501/6201 Attribute Class Name Cross Reference Use | 2-105 | |
| | 2.5 | QAl Entity Class Name Cross Reference Use | 2-123 | |
| | 2.6 | QAl Attribute Class Name Cross Reference Use | 2-143 | |
| | 2.7 | Attribute Class/Entity Class Index Explanation | 2-161 | |
| | 2.8 | Hierarchy Development | 2-207 | |
| | | 2.8.1 Introduction | 2-207 | |
| | | 2.8.2 Entity-Activity Relationships | 2-209 | |
| | | 2.8.3 Entity Class Hierarchy | 2-221 | |
| | 2.9 | Entity Class FEO's | 2-235 | |
| | | 2.9.1 Entity Class FEO Development | 2-235 | |
| | | 2.9.2 Entity Class FEO Diagrams | 2-239 | |
| | | 2.9.3 Entity-FEO Matrix | 2-261 | |
| | | 2.9.4 FEO Hierarchy | 2-271 | |
| | | 2.9.5 Entity Index | 2_285 | |

TABLE OF CONTENTS

Composite information Model of "Manufacture Product" (MFG1)

| Section | | | Page |
|---------|---|----------------------------|------|
| 3 | MFGI I | DEF1 MODEL | 3-1 |
| | 3.1 | MFG1 Node Index | 3-1 |
| | 3.2 | MFG1 Diagrams and Glossary | 3-15 |
| 4 | ARCHITECTURE PART III DOCUMENT REQUEST ORDER FORM | | 4-1 |

SECTION 1 SCOPE

1.1 Identification

This volume documents that part of the ICAM Architecture of Manufacturing designated as MFGl. MFGl depicts the "AS IS" architecture of aerospace manufacturing from an information viewpoint.

This part of the architecture has been developed using IDEF1 (ICAM Definition language) information modeling. The model presented here in, MFG1 is a composite information model of the entity and attribute classes associated with the "Manufacture (Aerospace) Product" function model. This composite view architecture is respresentative of the majority of aerospace manufacturers in the United States and is not intended to represent any specific company.

This volume extends and supercedes Volume IX - Composite Information Model of "Manufacture Product" (MFG1) published in June of 1981 as part of the ICAM Architecture Part II Project Priority 1102.

This volume documents work performed under ICAM Project Priority 1104 - ICAM Architecture of Manufacturing Part III.

1.2 Background

The Integrated Computer Aided Manufacturing (ICAM) program has as its objective the improvement of productivity in the aerospace manufacturing sectors of American industry. It is directed toward improving productivity through the systematic application of computer technology in the manufacturing evironment. This approach stresses the development of computer aided manufacturing capabilities. The integration of these computer aides into the manufacturing environment and among themselves will ultimately signal the success of the ICAM program.

A key to the achievement of this goal is the development of the ICAM Definition (IDEF) Methods and the ICAM composite models of manufacturing. The ICAM Definition Methods are a family of techniques through which analysts and laymen explore and discuss the nature of manufacturing systems. These techniques, developed for the ICAM program, provide a means of studying, recording, and communicating the inherent requirements and realities of the aerospace manufacturing environment. They are equally effective and valuable in any other manufacturing and non-manufacturing environments.

There are three ICAM Definition Methods: IDEF \emptyset - Function Modeling; IDEF1 - Information Modeling; and IDEF2 - Dynamics Modeling. A manufacturing system is described and studied through the application of all three techniques.

The ICAM composite models of manufacturing, or architectures, record a "consensus view" of what manufacturing is and how it operates. Composite architectures are presented in two forms: the "AS IS" form - representing the way in which manufacturing is currently accomplished; and the "TO BE" form - representing the way in which manufacturing will be accomplished with computer aids in place.

As prime contractor, SofTech subcontracted to Huges Aircraft Company the development of the "AS IS" information model of manufacturing. The model is presented in its current state of development. It is expected that refinements will continually be made to the model as a result of its use. The vast amount of information which it contains makes it impossible to comprehend by cursory examination. A tremendous effort has gone into the preparation of the model which is the end result of this project. This report summarizes that effort and presents the critical features of the resulting model. Many stages of critique, validation, and checking have been invested to make sure that the published model and glossary are as complete, readable, consistent and correct as possible. The majority of the nodes presented have completed Phase 3 of the modeling discipline.

This volume contains two books:

Book 1 - Composite Information Model Development and Enhancement

Book 2 - Composite Information Model of "Manufacture Product" (MFG1)

The process of developing an IDEF1 model involves subdividing the model into <u>nodes</u> and the modeling effort in phases.

A node represents everything that is known in any given phase about a particular aggregate of information called an entity class. Each node is assigned a (model unique) node number which is found in the lower left-hand corner of each model diagram. Each node individually passes through each phase of the model building effort. As such, the model does not move en masse from phase to phase, but rather moves as individual nodes, one at a time. It is common during model development to find nodes in each of the phases.

There are five phases in IDEF1 development. The first phase, Phase O, establishes the context of the model to be produced and the purpose and viewpoint of the model.

Phase 1 involves the establishment of entity classes, their names, and their definitions. This is the true starting point of the model proper. Each node that starts here or is created later must be documented in Phase 1.

In Phase 2, entity classes are paired according to the observed associations between them. These associations are called relation classes, and are also given names and definitions.

In Phase 3 two very important transformations take place. First, relation classes are refined. This usually involves the creation of new entity classes which are referred back to Phase 1 for incorporation. Second, since each entity class is thought of as representing many similar entities, a distinction is made by listing the unique properties of each entity class. These properties are called key attribute classes.

Finaly, in Phase 4, the remaining attribute classes are identified, named, and defined. This also results in the creation of new entity classes which again are referred back to Phase 1.

Figure 1 is an IDEFO diagram depicting the 5 Phases of development for IDEF1 nodes.

The architecture presented in this 2-part volume is based on the 1981 version, but differs from it in three ways.

The changes were intended to:

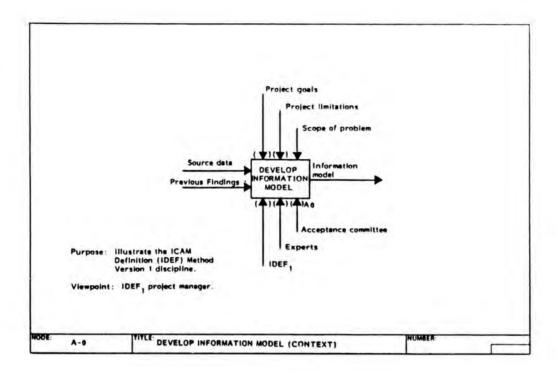
- Incorporate comments from industry reviewers
- Utilize knowledge gained by development of IDEF1 models for subsystems
- Promote readability of the models.

Under this priority, there was a need not only to composite the MFGl model and subsystem models, but to develop a procedure for such compositing. The procedure calls for phases which closely parallel the phases used to develop an IDEFl model initially. The complete procedure is presented in Volume II of this report.

The compositing effort occurred in two stages. In the first stage the models developed in Project Priority 5501 Integrated Planning System and Project Priority 6201 Manufacturing Control and Material Management were composited into MFG1. This effort resulted in the addition of seventy-seven (77) entity classes (with associated relation classes, attribute classes, and key classes) to MFG1. In addition the equivalence of many other entity classes within the three models was established.

In the next stage, QAl, the IDEF1 model of Quality Assurance, was composited with MFG1. This resulted in the addition of another eight (8) entity classes as well as the identification of more equivalent entity classes.

In addition to the content added to the model through compositing, the coalition used industry comments to extend and refine the model. To ensure an orderly processing of suggestions, a priority system was established. This system is described in Appendix K of the Project Priority 1104 Technical Report dated 31 March 1981. Briefly, the system analyzed changes required for seven classifications as follows:



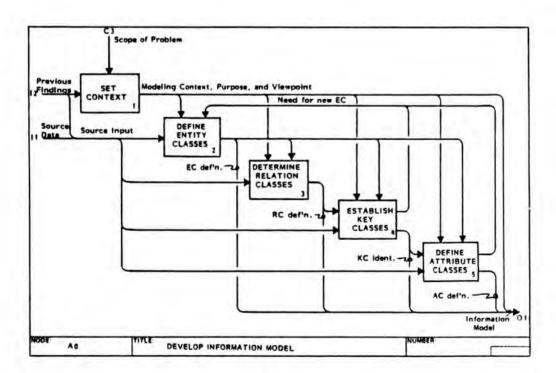


Figure 1. IDEF Diagrams of Develop Information Model

| IMPACT CLASS | CATEGORY OF ACTION | WEIGHTING FACTOR |
|--------------|-----------------------------------|------------------|
| Α. | New Entity Class(es) Required | 7 |
| В. | Relation Class Syntax Changes | б |
| C. | New Attribute Class(es) Required | 5 |
| D. | Key Class Changes | 4 |
| E. | Changes to Function Views | 3 |
| F. | Relation Class Label Changes | 2 |
| G. | Relation Class Definition Changes | 1 |

The total of the weighting factors for each change was obtained. This total then determined the order in which changes were processed.

The combination of industry comments and compositing of subsystem models increased the count of entity classes in the model from 182 to 290.

It was noted that the existing FEO's did not cover all of the entity classes of IDEF1. To cover this deficiency, a study was undertaken of structures which could be inferred in MFG1. Groupings based on MFGO were explored. Finally, ten new FEO's were developed and included in the model. A description of this effort is included elsewhere in this volume.

1.3 Functional Description of Document

This volume (VI) documents the Architcture of Manufacturing Information Model (MFGl) which when combined with Volumes III - DESØ, IV - DESI, V - MFGØ of this report make up the current ICAM Architcture of Manufacturing. Volume VI - MFGl is an integrated composite IDEF1 model of the information structure indigenous to aerospace manufacturing.

This volume has been divided into two parts due simply to the excessive physical size of the MFGl model.

Part 1 is devoted mainly to documenting the results of subsystem integration and readability enhancements to the MFG1 model.

Part 2 contains a complete node index and the complete MFGl model. This model presently incorporates all changes, modifications and enhancements precipitated by the June 1981 1104 Coalition Review meeting at Wright Patterson Air Force Base. This model also contains all changes and additions required due to the integration of the sub-systems IPS, MCMM and QA.

FTR110410000U 8 September 1983

This volume is intended as a guide for the development of IDEF1 models by systems analysts and database designers involved in the integration of new manufacturing and computer system technology into the manufacturing environment.

SECTION 2 REQUIREMENTS

2.1 Development of the Composite Information Model

Phase 0 - Context of the Model

The purpose of this IDEF 1 information model was to represent a composite view of the information structure indigenous to aerospace manufacturing in its current (AS IS) state.

The viewpoint was that of factory administration in an aerospace manufacturing environment; the terms and definitions reflected were those most commonly used by factory operations personnel.

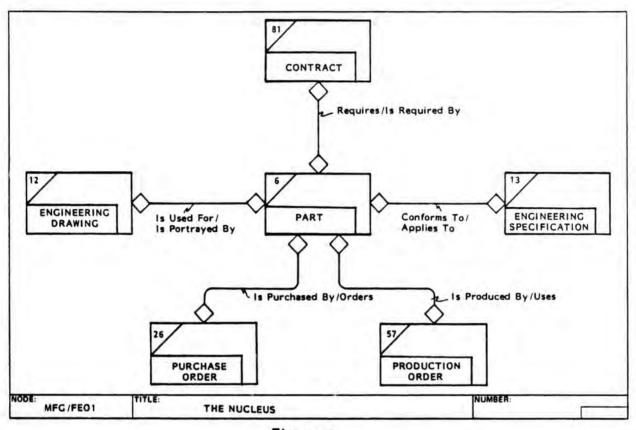


Figure 2

Based on the governing parameters of the information modeling task (the stated purpose and viewpoint), data was gathered from six aerospace manufacturing facilities. A simple scope was defined based on the predominant entity classes which resulted from initial study. There were approximately thirty entity classes represented in the initial scope. However, they all revolved around six major entity classes, which might be viewed as the nucleus of the information model.

Working from the initial scope, refinements were made to the initial model structure. These refinements resulted in the addition of new entity classes and more precise relation class definition. Growth of the model was based on further study, application of basic modeling rules and reviewer comments on the working document. At this point the model contained 80 entity classes and the nucleus had grown to 11 entity classes.

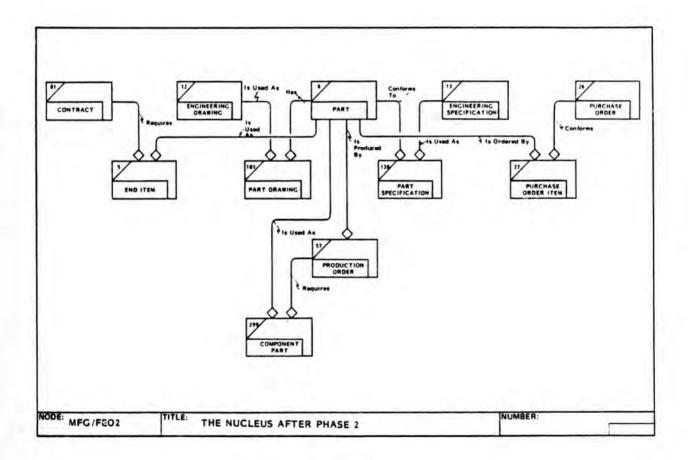


Figure 3

The establishment of key classes and enforcement of the key class migration rule resulted in identification of many new entity classes and a significant amount of restructuring of the relationships between entity classes. The size of the model made it necessary to concentrate on specific relationships between two or three entity classes at a time. As a result, many relationships which appeared to be stable at an earlier phase were made more precise. It was also found that some entity classes were not desirable in the model. Some of these entity classes were highly controversial and cluttered the more positive aspects of the model. Some were no longer useable as the refinements made to the model had essentially replaced them. At this point the model contained approximately 160 entity classes.

During the last phase of model development it became necessary to begin validation of the structure from a 'topical' viewpoint. The model had become so large that it was not practical to recall its structure in total. With Phase 4 only partially complete, the model contained over 300 entity classes. More than 180 of these were represented by diagrams. Many of the new entity classes were somewhat abstract because they resulted from adherence to IDEF₁ method rules. If viewed out of context, much of their significance and justification for existance, was lost. It was for these reasons that 'function views,' i.e., topical reflections, of the information model were developed.

Function Views

A function view represents a cluster or group of entity classes which have to do with a single topic. The term "function view" should not be confused with the term "functional view" or representation as used in IDEF $_{0}$. Function views do not exhibit the structure of processes. They exhibit the elements of the information structure which might be referenced in the performance of a function or in the conveyance of meaningful information about a specific topic.

An IDEF 1 function view contains only those entity classes and relation classes between them which have to do with the stated subject. Frequently, the entity classes depicted in a function view have relation classes with other entity classes which are not part of the function view. This happens because those other entity classes fall outside the scope of the subject of the function view.

The parameters for establishing the topic of an IDEF 1 function view are loosely stated. In general, a function view should represent a meaningful topic and should not contain more than 25 to 30 entity classes. This size represents a practical upper limit on the number of entity classes which can be understood in a single function view.

The following pages contain the function views developed under Project 1102. These function views contain only the entity classes that are pertinent to the stated subject. Therefore, not every entity class in the "AS IS" MFG1 model is represented in these function views. Part 2 of this volume contains all of these entity classes identified in the Project which had reached Phase 2 of the discipline by the completion of the project.

F1 Constructing a Part Procurement Request F3 Splitting/Combining Requests for Purchased Parts F4 Constructing a Part Procurement Order Constructing a Part Production Order F8 F10 Part Procurement Request Change Traceability F11 Validation of Raw Material Callout on a Part Production Order F12 Constructing a Planned Routing F13 Validation of Component Part Callout on a Planned Routing F14 Part Stock Location Traceability F15 Validation of Equipment Callout on a Planned Routing F16 Validation of Tool Callout on a Planned Routing F17 **Evaluating Work Center Resources and Capabilities** F18 Dispositioning of Purchased Part Deliveries

Figure 4. Composite Information Model Function Views

CONSTRUCTING A PART PROCUREMENT REQUEST

This function view reflects the cluster of entity classes which would be involved in the process of constructing a part procurement request. It does not deal with the issue of why a particular part is being requested; it is focused only on the issue of recording the request for procurement.

Referring to the model, the following scenario may be reconstructed:

An <u>employee</u> issues some number of <u>purchase requests</u>. Each request is associated with a <u>cost account</u>. The request is for a <u>part</u> which is defined by <u>drawings</u> and directed to a particular requested supplier. After the necessary <u>request approvals</u> the <u>purchase request</u> is forwarded to a buyer for processing.

This function view is one of several which, when evaluated together, are intended to reflect the information a buyer has available relative to each purchase order awarded. (Ref. P4/F1, P4/F3, P4/F4, P4/F10, P4/F18.)

NODE:

MFG/F1

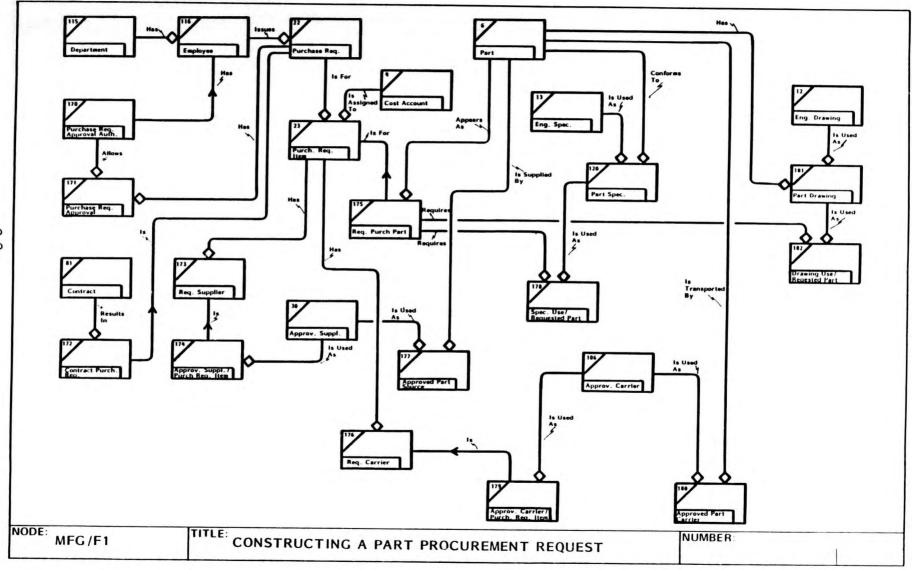
TITLE:

CONSTRUCTING A PART PROCUREMENT REQUEST

NUMBER:

8 September 19

PUBLICATION



8 September 1

SPLITTING/COMBINING REQUESTS FOR PURCHASED PARTS

This function view reflects the cluster of entity classes which would be involved in controlling the splitting and/or combining of requests for purchased parts. Its primary focus is on the matter of traceability from the originating purchase requisition item to the resulting purchase order item.

Referring to the model, the following scenario may be reconstructed:

For one of a number of causes, a decision is made to either <u>split</u> or <u>combine</u> a <u>purchase</u> <u>request</u>. When this action is taken, full traceability from the original purchase requisition to the resultant purchase order item(s) must be maintained. Additionally, the ability to trace how a specific purchase order item was composed, i.e., from the purchase order "backward" to the purchase requisition item(s) it supports, must be maintained. This function view is one of several which, when evaluated together, are intended to reflect the information a buyer has available relative to each purchase order awarded. (Ref. P4/F1, P4/F3, P4/F4, P4/F10, P4/F18.)

NODE: MFG/F3

TITLE: SPLITTING/COMBINING REQUESTS FOR PURCHASED PARTS NUMBER:

_

FTR110410000U September 1983

FTR110410000U 3 September 1983

CONSTRUCTING A PART PROCUREMENT ORDER

This function view reflect: those entity classes which would be involved in the process of constructing a part procurement order. It does not deal with such subjects as selecting a qualified supplier, splitting or combining purchase requisition items, etc. Its focus is on the information used by the buyer to create a purchase order.

Referring to the model, the following scenario may be reconstructed:

Receipt of a <u>purchase requisition</u> by the procurement <u>department</u> triggers the generation of a <u>purchase order</u> (P.O.). A <u>buyer</u>, who is an <u>employee</u> of the procurement <u>department</u> is assigned responsibility for the P.O. The buyer generates the P.O., incorporating all of the reference <u>specifications</u> and <u>drawings</u> describing the <u>part</u> to be procured, as well as the <u>contract</u> number, <u>cost account</u> and <u>approved supplier</u> address. The P.O. is routed for final approvals and released to the subcontractor.

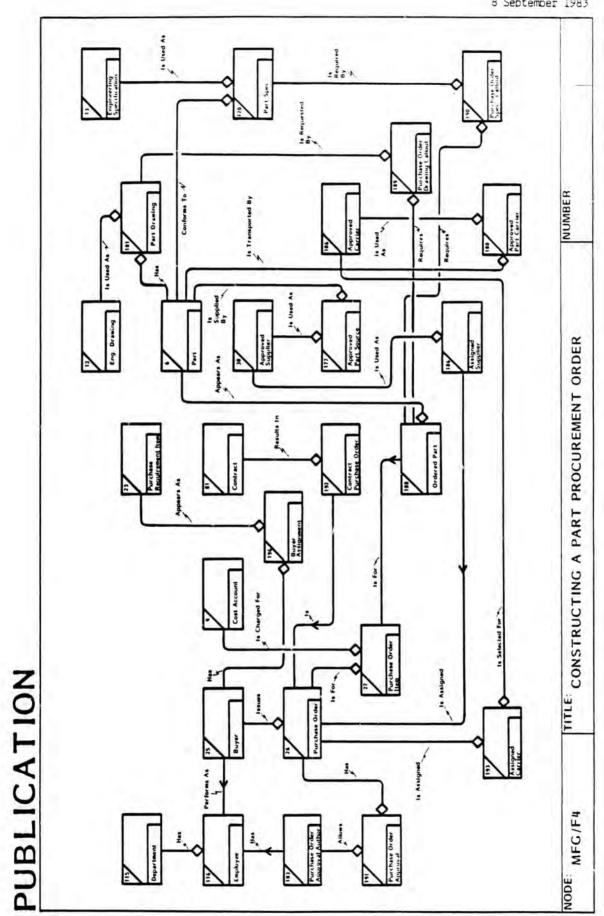
This function view is one of several which, when evaluated together, are intended to reflect the information a buyer has available relative to each purchase order awarded. (Ref. P4/F1, P4/F3, P4/F4, P4/F10, P4/F18.)

NODE: MFG/F4

TITLE: CONSTRUCTING A PART PROCUREMENT ORDER

NUMBER:

3 September 198



CONSTRUCTING A PART PRODUCTION ORDER

This function view reflects those entity classes which would be used in the process of constructing a part production order. It excludes such processes as defining the manufacturing steps needed to produce a part, validation of the conformance of required raw material, etc. Its focus is on the information used by the manufacturing planner to create a production order.

Referring to the model, the following scenario may be reconstructed:

Once the determination has been made to make a part, as well as how to make it, it still remains to actually order the performance of work to make the part. This is accomplished with a production order. A manufacturing planner builds a production job package, comprised of applicable drawings, specifications and job routing instructions. The package is validated for labor charges with the attachment of the approved production order and its cost account number.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

NODE:

MFG/F8

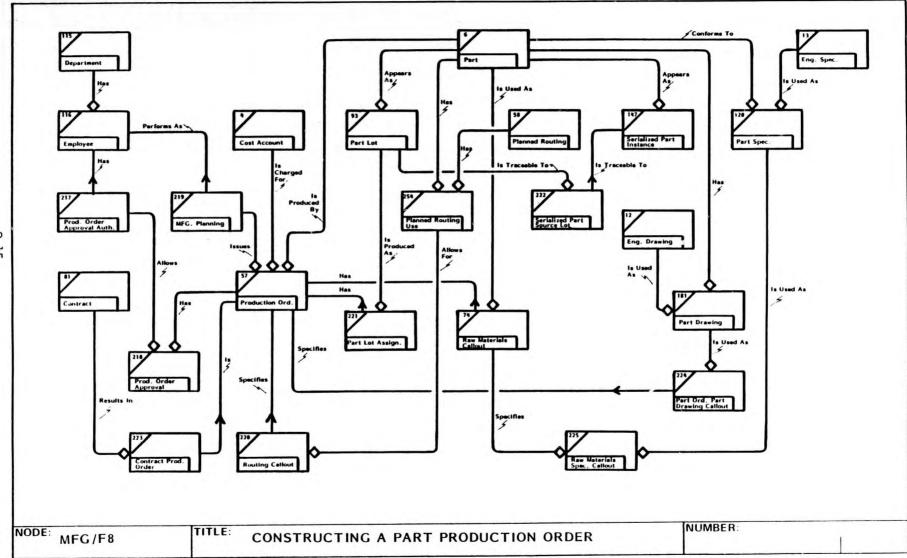
TITLE:

CONSTRUCTING A PART PRODUCTION ORDER

NUMBER:

September 198

PUBLICATION



5

FTR110410000U September 1983

PART PROCUREMENT REQUEST CHANGE TRACEABILITY

This function view reflects those entity classes which are required to provide for tracking individual purchase requisition changes and their effectivity (as related to affected purchase orders) in an environment which supports the splitting and/or combining of purchase requisition items.

Referring to the model, the following scenario may be reconstructed:

In addition to adding or deleting requirements to a released procurement requisition (splitting or combining) changes may actually be imposed which are of a technical nature.

When a <u>change request</u> (to a procurement request) is received, all of the original applicable part description (drawings, specifications, etc.) are reviewed. The <u>effects</u> (or impact) of the request are evaluated by an approval authority. If it is approved, the procurement request is revised and released.

In the process of effecting a change, information providing traceability to the source of the change and the net affect of the change must be maintained.

This function view is one of several which, when evaluted together, are intended to reflect the information a buyer has available relative to each purchase order awarded.

(Ref. P4/F1, Pr/F3, P4/F4, P4/F10, P4/F18.)

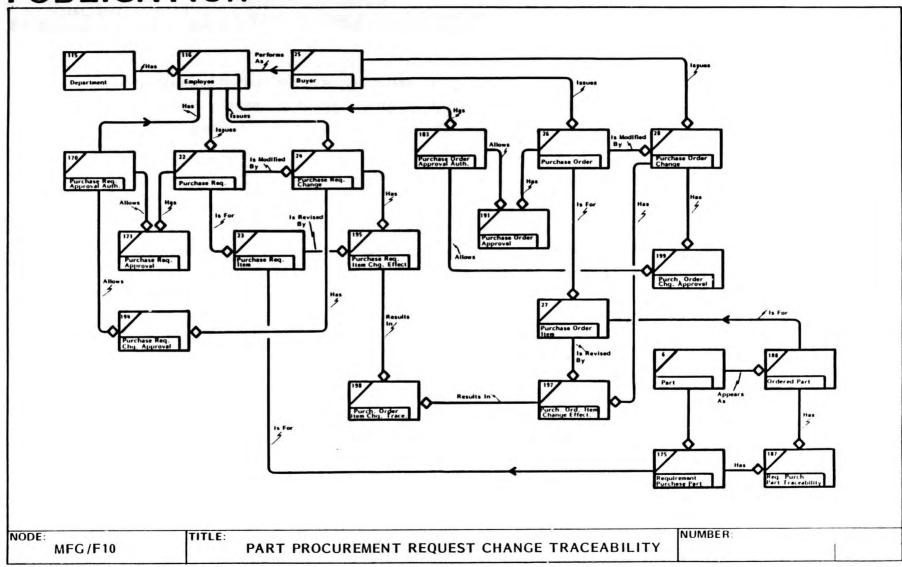
NODE: MFG/F10

TITLE: PART PROCUREMENT REQUEST CHANGE TRACEABILITY

NUMBER:

September 19

PUBLICATION



2-17

FTR110410000U September 1983

VALIDATION OF RAW MATERIAL CALLOUT ON A PART PRODUCTION ORDER

This function view reflects those entity classes which would be involved in the process of validating the raw material callout of a part production order. Its focus is on the information used to determine the acceptability of specified raw material prior to release of the production order to manufacturing.

Referring to the model, the following scenario may be reconstructed:

<u>Drawings</u> and <u>specifications</u> define both the physical <u>material requirements</u> and material <u>conformance certification</u> requirements.

These requirements are initially communicated to a supplier on the purchase order. Once the material is delivered to the ordering agency, and prior to its acceptance for use on a particular production order, inspectors ascertain that the material is suitably certified and conforming to the specified requirements.

Traceability is retained regarding what <u>material lot</u> is used to produce a given group of serialized part numbers.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

NODE:

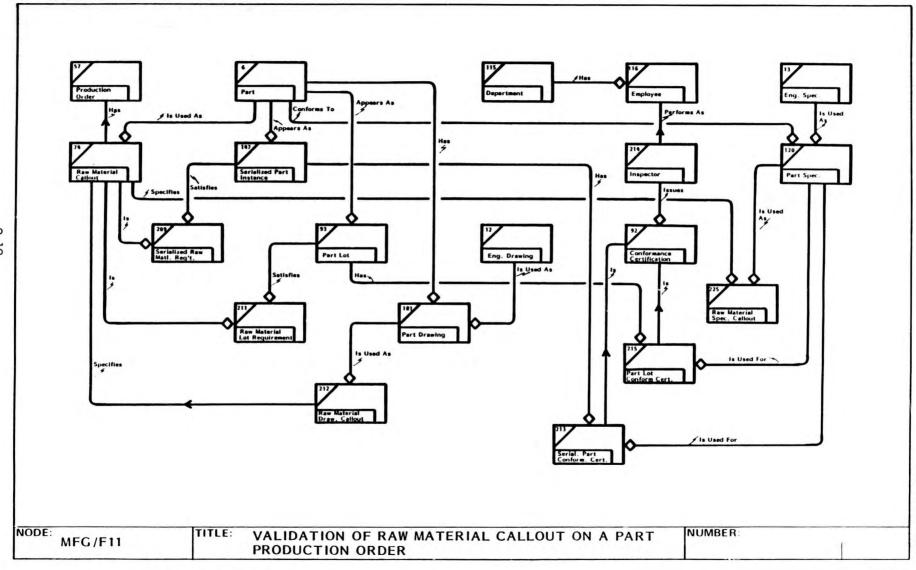
MFG/F11

TITLE: VALIDATION OF RAW MATERIAL CALLOUT ON A PART PRODUCTION ORDER

NUMBER:

September 198

PUBLICATION



FTR110410000U September 1983

CONSTRUCTING A PLANNED ROUTING

This function view reflects those entity classes which would be involved in the process of constructing a planned routing. It does not deal with such subjects as the development of time standards, provisioning of required equipment, etc. Its focus is on the information used to create a planned routing.

Referring to the model, the following scenario may be reconstructed:

Manufacturing planning must communicate to the shop floor precisely how and what operations must be performed to produce a part. The document generated by planning to accomplish this is called a routing. The routing is a step-by-step procedure involving equipment specifications, process specifications, tool specifications. The routing also references the part drawing(s) and component part callouts as part of the processing narrative.

Finally, the routing identifies the work station(s) at which operations are to be performed.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

NODE:

MFG/F12

TITLE: CONSTRUCTING A PLANNED ROUTING

NUMBER:

FTR110410000U September 1983

PUBLICATION Is Used Equip Callout Operation Std. Is Used As

CONSTRUCTING A PLANNED ROUTING

FTR110410000U 8 September 1983

NUMBER:

NODE:

MFG/F12

TITLE:

VALIDATION OF COMPONENT PART CALLOUT ON A PLANNED ROUTING

This function view reflects those entity classes which would be involved in the process of validating a component part callout of a planned routing. Its focus is on the information used to determine the acceptability of a specified component part prior to execution of the work required by the affected planned routing item.

Referring to the model, the following scenario may be reconstructed:

Components previously manufactured and drawn from inventory for inclusion in a higher assembly must be subjected to quality assurance validation before use.

Before the parts are released to the shop floor for processing per the <u>planned routing</u>, inspectors verify that the part is in full conformance with <u>drawings</u> and <u>specification</u>, and that the accompanying <u>certifications</u> are in order.

A record is maintained as to what <u>serial numbered component part</u> has been used in a particular serialized next assembly.

Therefore, prior to releasing the work package, any serialized components which are required are checked by serial number, and the availability of quality assurance records validated.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

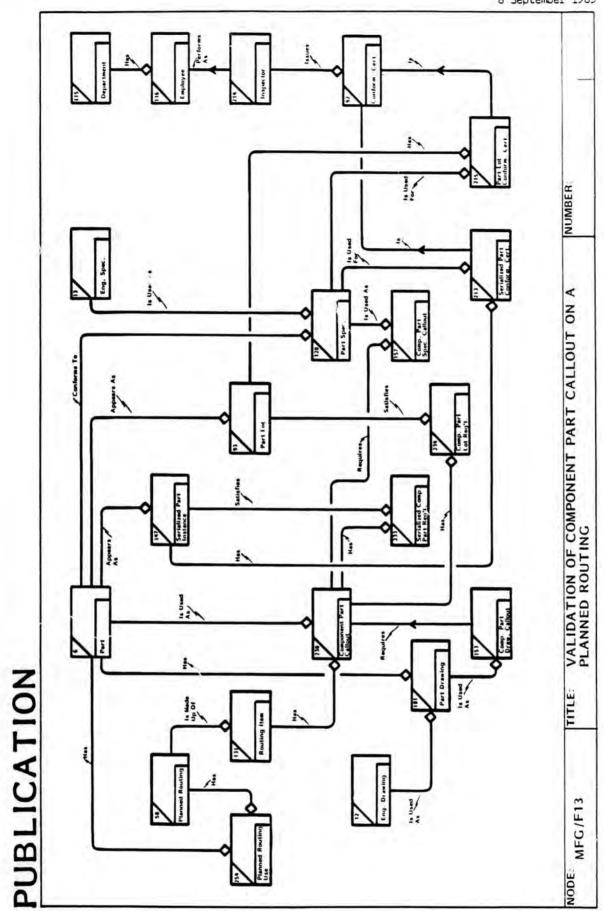
NODE:

MFG/F13

TITLE: VALIDATION OF COMPONENT PART CALLOUT ON A PLANNED ROUTING

NUMBER:

FTR110410000U September 1983



PART STOCK LOCATION TRACEABILITY

This function view reflects those entity classes which would be involved in the determination of what parts are stored in what locations.

Referring to the model, the following scenario may be reconstructed:

Typically, parts and material inventories must be monitored regularly to ascertain adequate supply.

Parts are stored in <u>coded locations</u>. Typically, certain sections of a factory are designated for storing certain kinds of material (raw material, detail parts, minor assemblies, motors/engines, etc.). The <u>parts</u> assigned to a specific <u>location</u> may be serialized or unserialized, may represent an entire lot, some portion of a lot, or not be associated with any lot; additionally, each location could have more than one part (identified by part number) in it, or more than one lot (identified by lot number) in it.

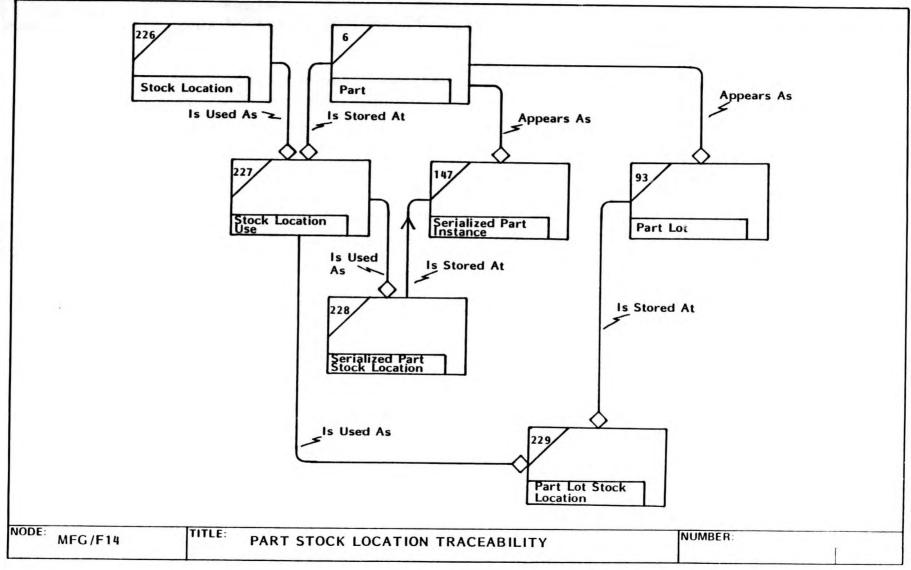
This function view reflects the information typically needed by a warehouse controller to:

- a. Determine the location of parts required to support a work package.
- b. Determine where locations are available for the storage of incoming parts to the warehouse.

NODE: MFG/F14 TITLE: PART STOCK LOCATION TRACEABILITY

NUMBER:

PUBLICATION



2-25

VALIDATION OF EQUIPMENT CALLOUT ON A PLANNED ROUTING

This function view reflects those entity classes which would be involved in the validation of an equipment callout of a planned routing. Its focus is on the information used to determine the acceptability of the specified equipment prior to execution of the work required by the affected planned routing item.

Referring to the model, the following scenario may be reconstructed:

Equipment used in production is subject to regular calibration, inspection and/or <u>certification</u> of performance suitability. This is applicable both to <u>in-house (owned) equipment</u> and <u>customer</u> (subcontractor) equipment.

Periodically inspectors will evaluate the equipment for conformance with specifications. Records are maintained identifying production part lots with the equipment producing them. Routing may specify a particular piece of equipment by name and/or number. Prior to release of a work package, records of the equipment called for must be checked to ensure a certified readiness for operation.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

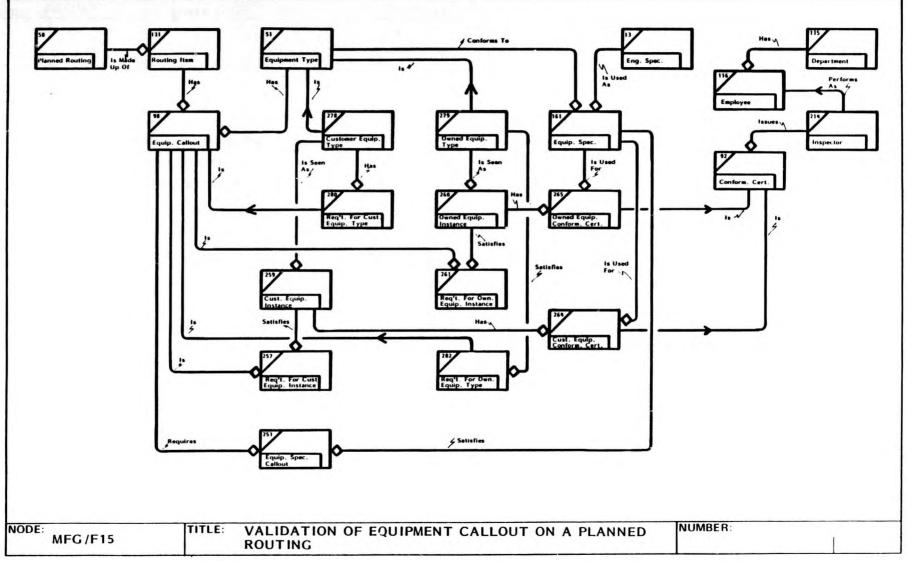
NODE:

MFG/F15

TITLE: VALIDATION OF EQUIPMENT CALLOUT ON A PLANNED ROUTING

NUMBER:

PUBLICATION



3

VALIDATION OF TOOL CALLOUT ON A PLANNED ROUTING

This function view reflects those entity classes which would be involved in the validation of a tool callout for a planned routing. Its focus is on the information used to determine the acceptability of the specified tool prior to the execution of work required by the affected routing item.

Referring to the model, the following scenario may be reconstructed:

Tools used in production are subject to regular calibration, inspection and/or <u>certification</u> of performance suitability. This is applicable both to <u>in-house (owned)</u> tools and <u>customer</u> (subcontractor) tools.

Periodically <u>inspectors</u> will evaluate tools for conformance with <u>specifications</u>. Records are maintained identifying production part lots with the tooling producing them. Routing may specify a particular tool or tooling fixture by name and/or number. Prior to the release of the work package, records of the tool called for must be checked to ensure a certified readiness for use.

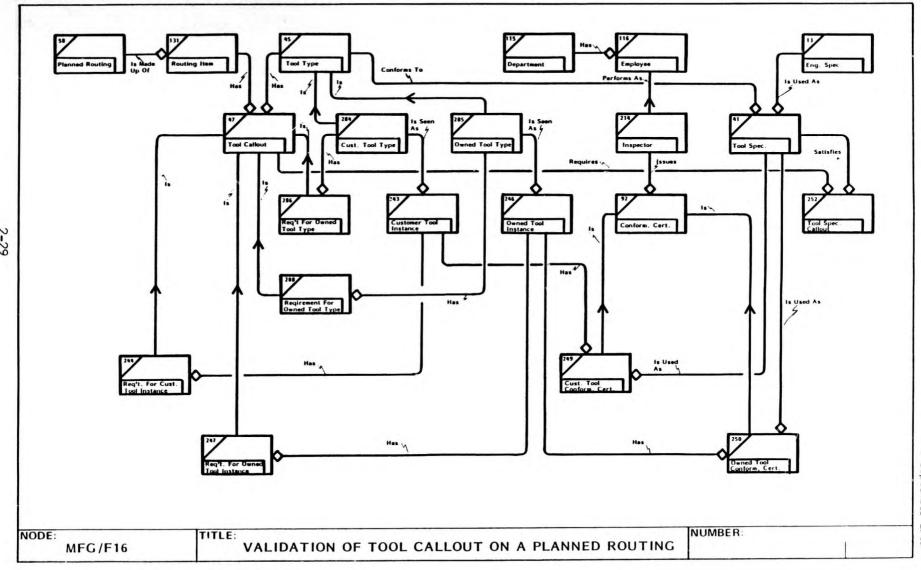
This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

NODE: MFG/F16

TITLE: VALIDATION OF TOOL CALLOUT ON A PLANNED ROUTING

NUMBER:

PUBLICATION



FIRIIO410000 September 198

EVALUATING WORK CENTER RESOURCES AND CAPABILITIES

This function view reflects those entity classes which would be involved in the evaluation of work center resources and capabilities. This function view deals only with the current timestate. Therefore, historical and future (planned) resource distribution is not within its scope.

Referring to the model, the following scenario may be reconstructed:

Production routings are frequently very specific as to requirements for the use of a particular tool, equipment, skill or work station for the performance of a process. Prior to the release of the work package, the availability of the resources called out at a specified work station must be validated.

This function view is one of several which, when evaluated together, are intended to reflect the information available to the manufacturing planner which enables the validation and release of production work packages to manufacturing. (Ref. P4/F8, P4/F11, P4/F12, P4/F13, P4/F15, P4/F16.)

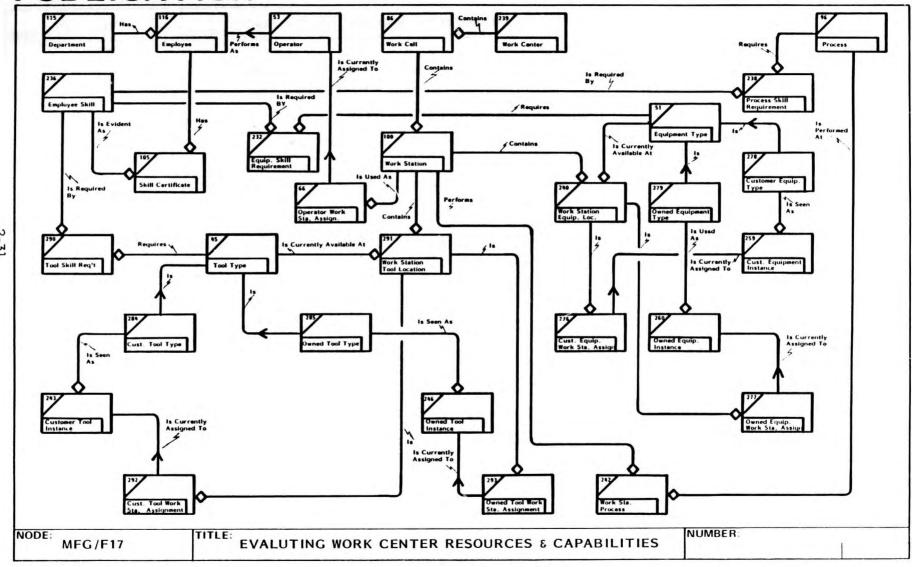
NODE:

MFG/F17

TITLE: EVALUATING WORK CENTER RESOURCES AND CAPABILITIES

NUMBER:

PUBLICATION



8 Sept

R110410000U tember 1983

DISPOSITIONING OF PURCHASED PART DELIVERIES

This function view reflects those entity classes which would be involved in the dispositioning of deliveries of purchased parts. It does not deal with the specifics of inspection, which is the subject of a separate function view. Its focus is on information used to define the results of such inspection, either in the form of rejection or acceptance of a delivery item.

Referring to the model, the following scenario may be reconstructed:

The determination to accept or reject delivered material results in one of the following:

Acceptance - deliverables conform to <u>drawings</u> and <u>specifications</u>;

Certification is in order,; parts/material is allocated to stock

- 2. Reject -
 - (a) Rework deliverables are non-conforming but may be reworked by subcontractor; thereafter certified for conformance to specs and drawings, and accepted to stock.
 - (b) Scrap deliverables are non-conforming and may not be reworked; deliverables are returned to point of origin.

These determinations are made by $\underline{inspectors}$, referencing the $\underline{purchase\ order}$, $\underline{drawings}$ and $\underline{specifications}$.

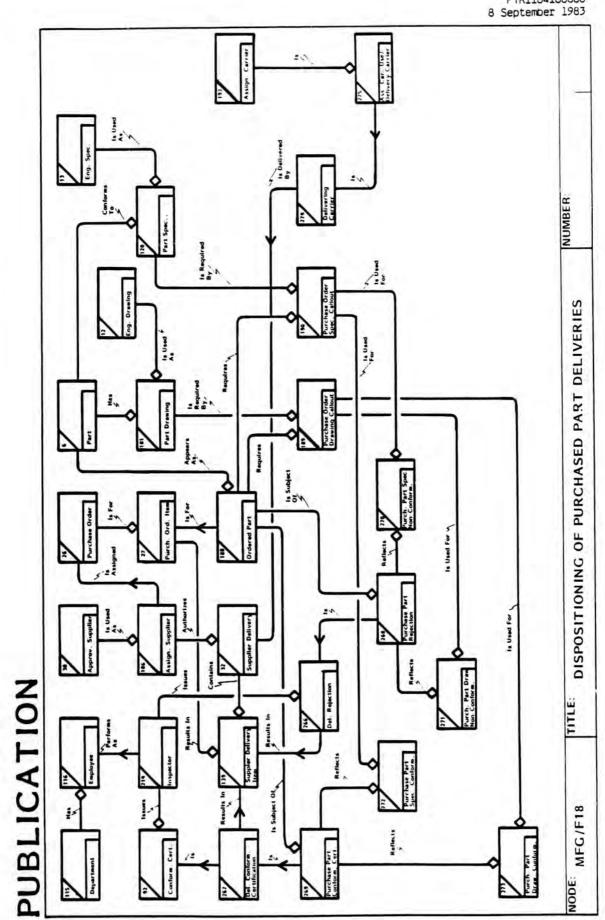
This function view represents information regarding incoming procurement items which is used for validation of purchase order item status and availability of procured items prior to release of a work package.

NODE:

MFG/F18

TITLE: DISPOSITIONING OF PURCHASED PARTS DELIVERIES

NUMBER:



2-33/2-34

Section 2.2

ENTITY CLASS NAME

CROSS REFERENCE USE

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|-----------|-----------------------------|-------|-------------|--------|------|----------|
| Section 1 | PROJECT: | REV: | DRAFT | | | |
| | | | RECOMMENDE | D | | |
| | NOTES: 1 2 3 4 5 6 7 8 9 10 | | PUBLICATION | | | |

THE FOLLOWING ENTITY CLASS NAME CROSS REFERENCE IDENTIFIES THE SOURCE MODEL OR MODELS FROM WHICH EACH COMPOSITE VIEW ENTITY CLASS WAS DERIVED. IT IS SEQUENCED BY COMPOSITE VIEW ENTITY CLASS NUMBER AND LISTS THE COMPOSITE VIEW ENTITY CLASS NAME, MFG1 ENTITY CLASS NUMBER, MFG1 ENTITY CLASS NAME, 5501/6201 ICV ENTITY CLASS NUMBER AND 5501/6201 ICV ENTITY CLASS NAME.

-37

NODE:

September 198

NUMBER:

| 1 | |) | Ċ | |
|---|---|----|---|--|
| | ֚֚֚֚֡֝֝֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜ | 70 | | |
| ` | | _ | | |
| | | | | |

| | MFG1 ICV ENTITY CLASS NAME | | MFG1 | EC # | 5501/6201 ICV |
|------|------------------------------|---------|------------------------------|------|------------------------------|
| EC1 | CUSTOMER | El | CUSTOMER | | |
| E2 | SALES ORDER | E2 | SALES ORDER | E56 | GENERAL ORDER |
| E4 | COST ACCOUNT | E4 | COST ACCOUNT | E34 | ACCOUNT |
| | | | | E50 | SUBDIVISION OF WORK |
| E5 | END ITEM | E5 | END ITEM | E21 | END ITEM |
| E6 | PART | E6 | PART | E12 | PART |
| E12 | RELEASED ENGINEERING DRAWING | E12 | RELEASED ENGINEERING DRAWING | E81 | RELEASED ENGINEERING DRAWING |
| E13 | ENGINEERING SPECIFICATION | E13 | ENGINEERING SPECIFICATION | | |
| E14 | ENGINEERING CHANGE | E14 | ENGINEERING CHANGE | | |
| E19 | PURCHASED ITEM REWORK ORDER | E19 | PURCHASED ITEM REWORK ORDER | | |
| E20 | PURCHASED ITEM SCRAP ORDER | E20 | PURCHASED ITEM SCRAP ORDER | | 11 |
| E22 | PURCHASE REQUEST | E22 | PURCHASE REQUEST | | |
| E23 | PURCHASE REQUEST ITEM | E23 | PURCHASE REQUEST ITEM | | 1 |
| E24 | PURCHASE REQUEST CHANGE | E24 | PURCHASE REQUEST CHANGE | | |
| E25 | BUYER | E25 | BUYER | | |
| E26 | PURCHASE ORDER | E26 | PURCHASE ORDER | | |
| E27 | PURCHASE ORDER ITEM | E27 | PURCHASE ORDER ITEM | | |
| E28 | PURCHASE ORDER CHANGE | E28 | PURCHASE ORDER CHANGE | | |
| E30 | CANDIDATE SUPPLIER | E30 | CANDIDATE SUPPLIER | | |
| E31 | QUALIFIED SUPPLIER | E31 | QUALIFIED SUPPLIER | | |
| E32 | SUPPLIER DELIVERY | E32 | SUPPLIER DELIVERY | | |
| E41 | TOOL SPECIFICATION | E41 | TOOL SPECIFICATION | | |
| ODE: | TITLE: EN | TITY CI | ASS NAME CROSS REFERENCE | | NUMBER: |

FTR110410000U

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC# | 5501/6201 ICV |
|-------|-----------------------------------|--------|-----------------------------------|-----------|--|
| E42 | TOOL DRAWING | E42 | TOOL DRAWING | | |
| E45 | TOOL TYPE | E45 | TOOL TYPE | | |
| E47 | OPERATION TOOL CALLOUT | E47 | OPERATION TOOL CALLOUT | E68 | OPERATION TOOL REQUIREMENT |
| E51 | EQUIPMENT | E51 | EQUIPMENT | E40 | EQUIPMENT |
| E53 | OPERATOR | E53 | OPERATOR | | The state of the s |
| E56 | MACHINE | E56 | MACHINE | | |
| E57 | PRODUCTION ORDER | E57 | PRODUCTION ORDER | E106 | PRODUCTION ORDER |
| E58 | STANDARD ROUTING | E58 | STANDARD ROUTING | 1 - 7 - 1 | |
| E63 | OPERATION STANDARD | E63 | OPERATION STANDARD | | |
| E66 | OPERATOR STATION ASSIGNMENT | E66 | OPERATOR STATION ASSIGNMENT | | |
| E68 | ENGINEERING BILL OF MATERIAL ITEM | E68 | ENGINEERING BILL OF MATERIAL ITEM | E43 | ENGINEERING BILL OF MATERIAL ITEM |
| E69 | ENGINEERING RELEASE | E69 | ENGINEERING RELEASE | | |
| E74 | PROCESS PLAN MATERIAL CALLOUT | E74 | PROCESS PLAN MATERIAL CALLOUT | | |
| E79 | RESOURCE PLAN | E79 | RESOURCE PLAN | E93 | RESOURCE PLAN |
| E81 | sales contract | E81 | SALES CONTRACT | E6 | SALES CONTRACT |
| E84 | CONTRACT REVISION | E84 | CONTRACT REVISION | | |
| E87 | MATERIAL RECEIPT | E87 | MATERIAL RECEIVE | | |
| E88 | MANUFACTURE REQUEST | E88 | MANUFACTURE REQUEST | | |
| E89 | MATERIAL ISSUE | E89 | MATERIAL ISSUE | | |
| E90 | SUPPLIER QUOTATION REQUEST | E90 | SUPPLIER QUOTATION REQUEST | | |
| E91 | SUPPLIER QUOTATION | E91 | SUPPLIER QUOTATION | | |
| NODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| Ņ | 2-4 | | | |
|---|-----|---|---|---|
| ņ | 24 | | | |
| | i | ŗ | ì | , |

| | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|---|---------|--|------|------------------------------|
| E92 | CONFORMANCE CERTIFICATION | E92 | CONFORMANCE CERTIFICATION | | |
| E93 | PART LOT | E93 | PART LOT | E52 | FABRICATION LOT |
| E95 | MANUFACTURING PROCESS | E95 | MANUFACTURING PROCESS | | |
| E98 | EQUIPMENT CALLOUT | E98 | EQUIPMENT CALLOUT | | |
| E100 | STATION | E100 | STATION | E42 | STATION |
| E105 | SKILL CERTIFICATION | E105 | SKILL CERTIFICATION | | 7.2.2.2.2 |
| E106 | APPROVED CARRIER | E106 | APPROVED CARRIER | | |
| E107 | SUPPLIER INVOICE | E107 | SUPPLIER INVOICE | | |
| E109 | DEVIATION WAIVER | E109 | DEVIATION WAIVER | | |
| E113 | SUPPLIER RETURN | E113 | SUPPLIER RETURN | | |
| E114 | CONTRACT ITEM | E114 | CONTRACT ITEM | E17 | CONTRACT REQUIREMENT |
| E116 | EMPLOYEE | E116 | EMPLOYEE | E55 | EMPLOYEE |
| E118 | ENGINEERING BILL OF MATERIAL | E118 | ENGINEERING BILL OF MATERIAL | E85 | ENGINEERING BILL OF MATERIAL |
| E119 | ENGINEERING CHANGE ITEM | E119 | ENGINEERING CHANGE ITEM | E65 | ENGINEERING ORDER ITEM |
| E120 | PART SPECIFICATION | E120 | PART SPECIFICATION | | ENGINEERING ONDER TYPIN |
| E123 | ENGINEERING DRAWING CHANGE | E123 | ENGINEERING DRAWING CHANGE | | 4 |
| E126 | ENGINEERING SPECIFICATION CHANGE | E1236 | ENGINEERING SPECIFICATION CHANGE | | 11 |
| E130 | ENGINEERING BILL OF MATERIAL DRAWING CALLOUT | E130 | ENGINEERING BILL OF MATERIAL DRAWING CALLOUT | | |
| E131 | ROUTING ITEM | E131 | ROUTING ITEM | | |
| E132 | SALES ORDER ITEM | E132 | SALES ORDER ITEM | | |
| E134 | REFERENCE DRAWING | E134 | REFERENCE DRAWING | | |
| IODE: | TITLE: EN | TITY CI | LASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|---|--------|---|------|------------------|
| E139 | SUPPLIER DELIVERY ITEM | E139 | SUPPLIER DELIVERY ITEM | | |
| E140 | OPERATOR/MACHINE ASSIGNMENT | E140 | OPERATOR/MACHINE ASSIGNMENT | | |
| E147 | SERIALIZED PART INSTANCE | E140 | SERIALIZED PART INSTANCE | 1 | |
| E153 | COMPONENT PART DRAWING CALLOUT | E153 | COMPONENT PART DRAWING CALLOUT | | |
| E157 | COMPONENT PART SPECIFICATION CALLOUT | E157 | COMPONENT PART SPECIFICATION CALLOUT | | |
| E161 | EQUIPMENT SPECIFICATION | El6l | EQUIPMENT SPECIFICATION | | Attaches I |
| E162 | MANUFACTURING PROCESS SPEC. | E162 | MANUFACTURING PROCESS SPEC. | E86 | PROCESS STANDARD |
| E170 | PURCHASE REQUEST APPROVAL AUTHORITY | E170 | PURCHASE REQUEST APPROVAL AUTHORITY | | |
| E171 | PURCHASE REQUEST APPROVAL | E171 | PURCHASE REQUEST APPROVAL | | |
| E172 | CONTRACT PURCHASE REQUEST | E172 | CONTRACT PURCHASE REQUEST | l l | |
| E173 | REQUESTED SUPPLIER | E173 | REQUESTED SUPPLIER | | |
| E174 | APPROVED SUPPLIER USE FOR PURCHASE REQUEST ITEM | E174 | APPROVED SUPPLIER USE FOR PURCHASE REQUEST ITEM | | |
| E175 | REQUESTED PURCHASED PART | E175 | REQUESTED PURCHASED PART | | |
| E176 | REQUESTED CARRIER | E176 | REQUESTED CARRIER | | |
| E177 | APPROVED PART SOURCE | E177 | APPROVED PART SOURCE | | |
| E178 | ENGINEERING SPECIFICATION USED FOR REQUESTED PART | E178 | ENGINEERING SPECIFICATION USED FOR REQUESTED PART | | |
| E179 | APPROVED CARRIER USE FOR PURCHASE REQUEST ITEM | E179 | APPROVED CARRIER USE FOR PURCHASE REQUEST ITEM | | |
| E180 | APPROVED PART CARRIER | E180 | APPROVED PART CARRIER | | ì |
| E181 | PART DRAWING | E181 | PART DRAWING | - 1 | M. J |
| NODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

2-43

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|--|---------|--|------|---------------|
| E252 | TOOL SPECIFICATION CALLOUT | E252 | TOOL SPECIFICATION CALLOUT | | |
| E254 | STANDARD ROUTING USE | E254 | STANDARD ROUTING USE | 1 | |
| E255 | PART/PROCESS SPECIFICATION USE | E255 | PART/PROCESS SPECIFICATION USE | | |
| E256 | PROCESS SPECIFICATION CALLOUT | E256 | PROCESS SPECIFICATION CALLOUT | | |
| E257 | CUSTOMER EQUIPMENT REQUIREMENT | E257 | CUSTOMER EQUIPMENT REQUIREMENT | | |
| E259 | CUSTOMER EQUIPMENT INSTANCE | E259 | CUSTOMER EQUIPMENT INSTANCE | | |
| E260 | OWNED EQUIPMENT INSTANCE | E260 | OWNED EQUIPMENT INSTANCE | | |
| E261 | OWNED EQUIPMENT REQUIREMENT | E261 | OWNED EQUIPMENT REQUIREMENT | | |
| E264 | CUSTOMER EQUIPMENT CONFORMANCE CERTIFICATION | E264 | CUSTOMER EQUIPMENT CONFORMANCE CERTIFICATION | | |
| E265 | OWNED EQUIPMENT CONFORMANCE CERTIFICATION | E265 | OWNED EQUIPMENT CONFORMANCE CERTIFICATION | | |
| E266 | DELIVERY REJECTION | E266 | DELIVERY REJECTION | | |
| E267 | DELIVERY CONFORMANCE CERTIFICATION | E267 | DELIVERY CONFORMANCE CERTIFICATION | | |
| E268 | PURCHASED PART REJECTION | E268 | PURCHASED PART REJECTION | | |
| E269 | PURCHASED PART CONFORMANCE CERTIFICATION | E269 | PURCHASED PART CONFORMANCE CERTIFICATION | | |
| E270 | PURCHASED PART SPECIFICATION NON-CONFORMANCE | E270 | PURCHASED PART SPECIFICATION NON-CONFORMANCE | | |
| E271 | PURCHASED PART DRAWING NON- CONFORMANCE | E271 | PURCHASED PART DRAWING NON- CONFORMANCE | | |
| E272 | PURCHASED PART SPECIFICATION CONFORMANCE | E272 | PURCHASED PART SPECIFICATION CONFORMANCE | | |
| IODE: | TITLE: EN | TITY CI | ASS NAME CROSS REFERENCE | | NUMBER: |

45

8 Septembe

2-46

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|---|--------|---|------|---------------|
| E293 | COMPANY TOOL STATION ASSIGNMENT | E293 | COMPANY TOOL STATION ASSIGNMENT | | |
| E294 | ENGINEERING BILL OF MATERIAL PART LOT CALLOUT | E294 | ENGINEERING BILL OF MATERIAL PART LOT CALLOUT | | |
| E295 | ENGINEERING BILL OF MATERIAL SERIALIZED PART CALLOUT | E295 | ENGINEERING BILL OF MATERIAL SERIALIZED PART CALLOUT | | |
| E296 | ENGINEERING BILL OF MATERIAL SPECIFICATION CALLOUT | E296 | ENGINEERING BILL OF MATERIAL SPECIFICATION CALLOUT | | |
| E297 | SERIALIZED PART END USE | E297 | SERIALIZED PART END USE | | |
| E298 | ORIGINATING SUPPLIER QUOTATION REQUEST | E298 | ORIGINATING SUPPLIER QUOTATION REQUEST | | |
| E299 | COMPONENT PART | E299 | COMPONENT PART | | |
| E300 | IMAGE PART | E300 | IMAGE PART | | |
| E301 | ALTERNATE PART | E301 | ALTERNATE PART | | |
| E302 | REFERENCE SPECIFICATION | E302 | REFERENCE SPECIFICATION | | |
| E303 | TOOL DRAWING CALLOUT | E303 | TOOL DRAWING CALLOUT | | |
| E304 | SALES ORDER ITEM/CONTRACT ITEM | E304 | SALES ORDER ITEM/CONTRACT ITEM | | |
| E308 | WORK BREAKDOWN STRUCTURE | E308 | WORK BREAKDOWN STRUCTURE | | |
| E309 | SUPPLIER DELIVERY LOT | E309 | SUPPLIER DELIVERY LOT | | |
| E311 | WORK BREAKDOWN STRUCTURE USE FOR PURCHASE REQUEST ITEM | E311 | WORK BREAKDOWN STRUCTURE USE FOR PURCHASE REQUEST ITEM | | |
| E312 | WORK BREAKDOWN STRUCTURE ITEM | E312 | WORK BREAKDOWN STRUCTURE ITEM | | |
| | | | | | |
| NODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|------|---|--------|---|------|------------------------|
| E313 | PURCHASE REQUEST ITEM UNIT OF MEASURE | E313 | PURCHASE REQUEST ITEM UNIT OF MEASURE | | |
| E314 | PURCHASE REQUEST ITEM DELIVERY REQUIREMENT | E314 | PURCHASE REQUEST ITEM DELIVERY REQUIREMENT | | |
| E315 | PURCHASE ORDER ITEM DELIVERY REQUIREMENT | E315 | PURCHASE ORDER ITEM DELIVERY REQUIREMENT | | |
| E316 | PURCHASE ORDER ITEM UNIT OF MEASURE | E316 | PURCHASE ORDER ITEM UNIT OF MEASURE | | |
| E317 | WORK BREAKDOWN STRUCTURE USE | E317 | WORK BREAKDOWN STRUCTURE USE | | |
| | FOR PURCHASE ORDER ITEM | | FOR PURCHASE ORDER ITEM | | |
| E318 | NUMERICAL CONTROL PROGRAM | E318 | NUMERICAL CONTROL PROGRAM | | |
| E319 | NUMERICAL CONTROL PROGRAM CALLOUT | E319 | NUMERICAL CONTROL PROGRAM CALLOUT | | |
| E320 | MACHINE INSTRUCTION | E320 | MACHINE INSTRUCTION | | |
| E321 | NUMERICAL CONTROL PROGRAM MACHINE USE | E321 | NUMERICAL CONTROL PROGRAM MACHINE USE | | |
| E322 | QUALITY ASSURANCE NEED | E322 | QUALITY ASSURANCE NEED | E98 | QUALITY ASSURANCE NEED |
| E323 | SERIALIZED SUPPLIER PART SOURCE LOT | E323 | SERIALIZED SUPPLIER PART SOURCE LOT | Er Y | |
| E324 | PART SPECIFICATION REQUIREMENT | E324 | PART SPECIFICATION REQUIREMENT | | |
| E325 | SUPPLIER PART LOT STOCK LOCATION | E325 | SUPPLIER PART LOT STOCK LOCATION | | |
| E326 | EMPLOYEE TRAINING | E326 | EMPLOYEE TRAINING | | |
| ODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| ١ | O |
|---|---|
| ١ | ĭ |
| ì | |
| : | ⋋ |
| 7 | • |
| | |

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|------|---|---------|---|------|---|
| E327 | NON-SERIALIZED TOOL TYPE | E327 | NON-SERIALIZED TOOL TYPE | | |
| E328 | PERISHABLE NON-SERIALIZED TOOL TYPE | E328 | PERISHABLE NON-SERIALIZED TOOL TYPE | | |
| E329 | CUSTOMER FACILITY CONFORMANCE CERTIFICATION | E329 | CUSTOMER FACILITY CONFORMANCE CERTIFICATION | | |
| E330 | OWNED FACILITY CONFORMANCE CERTIFICATION | E330 | OWNED FACILITY CONFORMANCE CERTIFICATION | | |
| E331 | STATEMENT OF WORK | E331 | STATEMENT OF WORK | E5 | STATEMENT OF WORK |
| E332 | ENGINEERING CHANGE PROPOSAL | E332 | ENGINEERING CHANGE PROPOSAL | E8 | ENGINEERING CHANGE PROPOSAL |
| E333 | ENGINEERING ORDER | E333 | ENGINEERING ORDER | E9 | ENGINEERING ORDER |
| E334 | AUTHORIZED OPERATION | E334 | AUTHORIZED OPERATION | E110 | AUTHORIZED OPERATION |
| E335 | SECTION ACTIVITY | E335 | SECTION ACTIVITY | El | SECTION ACTIVITY |
| E336 | MANUFACTURING PROJECT PLAN | E336 | MANUFACTURING PROJECT PLAN | E29 | MANUFACTURING PROJECT PLAN |
| E338 | SCHEDULE CHANGE REQUEST | E338 | SCHEDULE CHANGE REQUEST | E35 | SCHEDULE CHANGE REQUEST |
| E340 | PART TOOL REQUIREMENT | E340 | PART TOOL REQUIREMENT | E67 | PART TOOL REQUIREMENT |
| E341 | END ITEM REQUIREMENT FOR TOOL | E341 | END ITEM REQUIREMENT FOR TOOL | E69 | END ITEM REQUIREMENT FOR TOO |
| E342 | ORGANIZATION EQUIPMENT REQUIREMENT | E342 | ORGANIZATION EQUIPMENT REQUIREMENT | E71 | ORGANIZATION EQUIPMENT REQUIREMENT |
| E344 | WORK BREAKDOWN STRUCTURE ITEM TOOL REQUIREMENT | E344 | WORK BREAKDOWN STRUCTURE ITEM TOOL REQUIREMENT | E73 | WORK BREAKDOWN STRUCTURE ITEM TOOL REQUIREMENT |
| E345 | DRAWING APPLICABILITY TO SALES CONTRACT | E345 | DRAWING APPLICABILITY TO SALES CONTRACT | E100 | DRAWING APPLICABILITY TO SALES CONTRACT |
| E346 | ACTIVITY POLICY | E346 | ACTIVITY POLICY | E19 | ACTIVITY POLICY |
| E347 | PROGRAM | E347 | PROGRAM | E37 | PROGRAM |
| ODE: | TITLE: EN- | CITY CI | ASS NAME CROSS REFERENCE | | NUMBER: |

| | | | | | 1 2 2 2 2 2 2 2 2 | | |
|-----|------|--|------|---|-------------------|-------------------------------|----|
| | E350 | STATION CALLOUT | E350 | STATION CALLOUT | E83 | STATION CALLOUT | ١ |
| | E351 | INDEX | E351 | INDEX | E51 | INDEX | ı |
| | E352 | CONFIGURATION BASELINE | E352 | CONFIGURATION BASELINE | E20 | CONFIGURATION BASELINE | ı |
| | E353 | MILESTONE | E353 | MILESTONE | E32 | MILESTONE | l |
| | E354 | ENGINEERING CHANGE REQUEST | E354 | ENGINEERING CHANGE REQUEST | E7 | ENGINEERING CHANGE REQUEST | l |
| | E355 | ORGANIZATION TASK | E355 | ORGANIZATION TASK | E61 | ORGANIZATION TASK | |
| | E358 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE PROPOSAL | E358 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE PROPOSAL | | | |
| 2- | E359 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE REQUEST | E359 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE REQUEST | | | |
| 50 | E360 | MASTER CHANGE RECORD | E360 | MASTER CHANGE RECORD | E57 | MASTER CHANGE RECORD | |
| | E361 | APPROVED ENGINEERING ORDER | E361 | APPROVED ENGINEERING ORDER | E10 | APPROVED ENGINEERING ORDER | |
| | E362 | TEST REQUIREMENT | E362 | TEST REQUIREMENT | E16 | TEST REQUIREMENT | |
| | E363 | SECTION | E363 | SECTION | E14 | SECTION | |
| | E364 | METHOD USE | E364 | METHOD USE | E59 | METHOD USE | |
| | E365 | SCHEDULE CHANGE AUTHORIZATION | E365 | SCHEDULE CHANGE AUTHORIZATION | E36 | SCHEDULE CHANGE AUTHORIZATION | |
| | E366 | TYPE-VERSION SHIP CALLOUT | E366 | TYPE-VERSION SHIP CALLOUT | E78 | TYPE-VERSION SHIP CALLOUT | |
| | E367 | CONFIGURED ITEM | E367 | CONFIGURED ITEM | E2 | CONFIGURATED ITEM | |
| | E368 | MATERIAL | E368 | MATERIAL | E3 | MATERIAL | |
| - 1 | E370 | MATERIAL PLAN | E370 | MATERIAL PLAN | E23 | MATERIAL PLAN | 13 |
| | | A COUNTY OF THE PROPERTY OF TH | | | | | |

ENTITY CLASS NAME CROSS REFERENCE

MFG1

TYPE-VERSION SHIP

PROJECT

EC #

E38

E39

5501/6201 ICV

TYPE-VERSION SHIP

PROJECT

NUMBER:

EC #

E348

E349

EC # MFG1 ICV ENTITY CLASS NAME

TITLE:

TYPE-VERSION SHIP

PRUJECT

E349

NODE:

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|------|--|--------|--|------|-----------------------------------|
| E371 | MANPOWER PLAN | E371 | MANPOWER PLAN | E24 | MANPOWER PLAN |
| E372 | TOOLING PLAN | E372 | TOOLING PLAN | E25 | TOOLING PLAN |
| E373 | FACILITIES PLAN | E373 | FACILITIES PLAN | E26 | FACILITIES PLAN |
| E374 | QUALITY CONTROL PLAN | E374 | QUALITY CONTROL PLAN | E27 | QUALITY CONTROL PLAN |
| E375 | EQUIPMENT PLAN | E375 | EQUIPMENT PLAN | E28 | EQUIPMENT PLAN |
| E377 | PLANNING PARTS LIST ITEM | E377 | PLANNING PARTS LIST ITEM | E44 | PLANNING PARTS LIST ITEM |
| E378 | CUTTING SPECIFICATION | E378 | CUTTING SPECIFICATION | E46 | CUTTING SPECIFICATION |
| E379 | VISUAL AID | E379 | VISUAL AID | E47 | VISUAL AID |
| E380 | WORK PACKAGE | E380 | WORK PACKAGE | E48 | WORK PACKAGE |
| E381 | APPROVED CONFIGURATION BASELINE | E381 | APPROVED CONFIGURATION BASELINE | E49 | APPROVED CONFIGURATION BASELINE |
| E382 | MATERIAL NEED | E382 | MATERIAL NEED | E58 | MATERIAL NEED |
| E383 | END ITEM METHOD OCCURRENCE | E383 | END ITEM METHOD OCCURRENCE | E60 | END ITEM METHOD OCCURRENCE |
| E384 | RESCHEDULED MILESTONE | E384 | RESCHEDULED MILESTONE | E62 | RESCHEDULED MILESTONE |
| E385 | DRAWING MATERIAL CALLOUT | E385 | DRAWING MATERIAL CALLOUT | E63 | DRAWING MATERIAL CALLOUT |
| E386 | PLANNED MANUFACTURING OPERATION MATERIAL REQUIREMENT | E386 | PLANNED MANUFACTURING OPERATION MATERIAL REQUIREMENT | E64 | LINE ITEM MATERIAL REQUIREMENT |
| E387 | END ITEM REQUIREMENT FOR PART | E387 | END ITEM REQUIREMENT FOR PART | E66 | END ITEM REQUIREMENT FOR PART |
| E388 | FABRICATION LOT SUBACCOUNT | E388 | FABRICATION LOT SUBACCOUNT | E70 | FABRICATION LOT SUBACCOUNT |
| E389 | END ITEM WORK ELEMENT | E389 | END ITEM WORK ELEMENT | E74 | END ITEM WORK ELEMENT |
| E390 | END ITEM REQUIREMENT FOR DRAWING | E390 | END ITEM REQUIREMENT FOR DRAWING | E75 | END ITEM REQUIREMENT FOR DRAWING |
| ODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| ١ | |) | Ü. |
|---|----|---|----|
| Ī | ľ | 1 | |
| ١ | 1 | п | 1 |
| t | ζ, | ١ | i |
| | | 7 | |
| | | | |

| " | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|---|------|---|------|---|
| E391 | ENGINEERING ORDER APPLICABILITY TO END ITEM | E391 | ENGINEERING ORDER APPLICABILITY TO END ITEM | E76 | ENGINEERING ORDER APPLICABILITY TO END ITEM |
| E392 | CUTTING SPECIFICATION CALLOUT | E392 | CUTTING SPECIFICATION CALLOUT | E79 | CUTTING SPECIFICATION CALLOUT |
| E393 | CHANGE REQUEST DRAWING CALLOUT | E392 | CHANGE REQUEST DRAWING CALLOUT | E80 | CHANGE REQUEST DRAWING CALLOUT |
| E395 | VISUAL AID CALLOUT | E395 | VISUAL AID CALLOUT | E84 | VISUAL AID CALLOUT |
| E396 | PLANNING PARTS LIST | E396 | PLANNING PARTS LIST | E90 | PLANNING PARTS LIST |
| E397 | PART REQUIREMENT FOR MATERIAL | E397 | PART REQUIREMENT FOR MATERIAL | E91 | PART REQUIREMENT FOR MATERIAL |
| E398 | DELIVERY SCHEDULE ITEM | E398 | DELIVERY SCHEDULE | E92 | DELIVERY SCHEDULE |
| E399 | RESOURCE NEED | E399 | RESOURCE NEED | E94 | RESOURCE NEED |
| E400 | MANPOWER NEED | E400 | MANPOWER NEED | E95 | MANPOWER NEED |
| E401 | TOOLING NEED | E401 | TOOLING NEED | E96 | TOOLING NEED |
| E402 | FACILITIES NEED | E402 | FACILITIES NEED | E97 | FACILITIES NEED |
| E403 | EQUIPMENT NEED | E403 | EQUIPMENT NEED | E99 | EQUIPMENT NEED |
| E404 | DRAWING APPLICABILITY TO CONFIGURATION BASELINE | E404 | DRAWING APPLICABILITY TO CONFIGURATION BASELINE | E101 | DRAWING APPLICABILITY TO CONFIGURATION BASELINE |
| E405 | PART SHORTAGE | E405 | PART SHORTAGE | E103 | PART SHORTAGE |
| E406 | STOP ORDER | E406 | STOP ORDER | E104 | STOP ORDER |
| E407 | AVAILABILITY OF MATERIAL | E407 | AVAILABILITY OF MATERIAL | E105 | AVAILABILITY OF MATERIAL |
| E408 | STOP ORDER APPLICATION | E408 | STOP ORDER APPLICATION | E107 | STOP ORDER APPLICATION |
| E409 | SCHEDULED PART | E409 | SCHEDULED PART | E109 | SCHEDULED PART |
| NODE: | ITITLE: | | LASS NAME CROSS REFERENCE | | INUMBER: |

| Ų |) | |
|----|---|--|
| ľ | | |
| ٠, | - | |
| • | : | |
| Ĵ | 4 | |
| | | |

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV |
|-------|---|------|---|------|-----------------------------------|
| E411 | PRODUCTION ORDER MATERIAL CALLOUT | E411 | PRODUCTION ORDER MATERIAL CALLOUT | E113 | PRODUCTION ORDER MATERIAL CALLOUT |
| E412 | PART SHORTAGE RECONCILIATION | E412 | PART SHORTAGE RECONCILIATION | E114 | PART SHORTAGE RECONCILIATION |
| E413 | FACILITY SPECIFICATION | E413 | FACILITY SPECIFICATION | | |
| E414 | DRAWING | E414 | DRAWING | E11 | DRAWING |
| E415 | PROCESS PLAN | E415 | PROCESS PLAN | E31 | PROCESS PLAN |
| E416 | ROUTING HEADER | E416 | ROUTING HEADER | | |
| E417 | ROUTING ITEM/STANDARD ROUTING | E417 | ROUTING ITEM/STANDARD ROUTING | | |
| E418 | PROCESS PLANNER | E418 | PROCESS PLANNER | E54 | PROCESS PLANNER |
| E420 | PROCESS PLAN USE AS PRODUCTION ORDER | E420 | PROCESS PLAN USE AS PRODUCTION ORDER | | |
| E421 | PLANNED MANUFACTURING OPERATION | E421 | PLANNED MANUFACTURING OPERATION | E22 | PLANNED MANUFACTURING OPERATION |
| E422 | ORGANIZATION | E422 | ORGANIZATION | | |
| E423 | COMPONENT ORGANIZATION | E423 | COMPONENT ORGANIZATION | | |
| E424 | FIRST ARTICLE EVALUATION | | | | U.5 |
| E425 | INSPECTION EVALUATION | | | | |
| E426 | MAJOR NON-CONFORMANCE | | | | |
| E427 | MRB DISPOSITION | | | | |
| E428 | MINOR NON-CONFORMANCE | | | M () | |
| | | | J. Taranta da Para da | | |
| | | | | 1 3 | |
| | | | | | |
| IODE: | TITLE: | | LASS NAME CROSS REFERENCE | | INUMBER: |

| EC # | MFG1 ICV ENTITY CLASS NAME | EC # | MFG1 | EC # | 5501/6201 ICV | |
|----------------------|--|------------|-------------------|------|---------------|--|
| E429 E430 E431 | NON-CONFORMING ITEM STANDARD REPAIR CALLOUT QA UNIT* | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | *Introduced to current syntax | | | * | Not used | |
| NODE: | TITLE: ENT | TITY CLASS | NAME CROSS REFERE | ENCE | IUMBER: | |

Section 2.3

RELATED ENTITY CLASS NODE CROSS REFERENCE

ST 252

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: | |
|----------|--------------------|----------|-------------|--------|------|----------|--|
| | PROJECT: | REV: | DRAFT | | | | |
| | | | RECOMMENDE | D | | | |
| | NOTES: 1 2 3 4 5 6 | 7 8 9 10 | PUBLICATION | | | | |

THIS CROSS REFERENCE LISTS EACH ENTITY CLASS NUMBER AND NAME, ALL RELATED ENTITY CLASSES INCLUDING RELATION CLASSES AND LABELS.

2-5

FTR110410000U 8 September 1983

NUMBER: 21

TITLE:
RELATED ENTITY CLASS NODE CROSS REFERENCE

NODE:

| NO. | LABEL LABEL | R.C. | LABEL LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------|-------------------------|---------------------------------|---------|-----------------------|
| 5 | END ITEM (Continued) | \leftarrow | TYPE-VERSION SHIP | 349 | IS |
| | | \rightarrow | END ITEM METHOD OCCURRE | NCE 383 | IS MANUFACTURED USING |
| | | \rightarrow | END ITEM REQ'MT FOR PAR | T 387 | HAS |
| | | \rightarrow | END ITEM WORK ELEMENT | 389 | IS COMPRISED OF |
| | | → | END ITEM REQ'MT FOR DWG | 390 | HAS |
| | | \rightarrow | END ITEM REQ'MT FOR TOO | _ 341 | HAS |
| 1 | | \rightarrow | RESOURCE NEED | 399 | HAS |
| | | \rightarrow | ENGRN ORDER APPLIC TO E ITEM | ND 391 | IS AFFECTED BY |
| 6 | PART | ◇ — | INDEX | 351 | HAS ASSIGNED TO IT |
| | | ◇ — | RELEASED ENGINEERING DW | G 12 | DEFINES |
| 1 | | ─ ◆ | N.C. PROGRAM | 318 | HAS |
| | | → | MAT'L ISSUE | 89 | HAS |
| | | $ \rightarrow \rangle$ | QUOTE REQ'ST | 90 | IS SUBJECT OF |
| | | | APPV'D PART CARRIER | 180 | IS TRANSPORTED BY |
| | | - | SUPPLIER DEL LOT | 309 | IS RECEIVED AS |
| | | - | PART LOT | 93 | APPEARS IS |
| | | | ORDERED PART | 188 | APPEARS AS |
| | | $ \rightarrow \rangle$ | PART SPEC | 120 | CONFORMS TO |
| | | $ \rightarrow \rangle$ | COMPONENT PART | 299 | IS |
| | | \rightarrow | COMPONENT PART | 299 | HAS |
| | | \rightarrow | ALTERNATE PART | 301 | HAS |
| | | | | | |
| NODE: | TITLE: RELA | TED ENT | TITY CLASS NODE CROSS | REFEREN | NUMBER: |

| NO. | LABEL | R.C. | RELATED ENTITY CLASS | NO. | RELATION CLASS LABEL |
|-----|------------------|-----------------------|--------------------------|--------|-----------------------------|
| 6 | PART (Continued) | > | ALTERNATE PART | 301 | IS |
| | | \rightarrow | COMPONENT PART CALLOUT | 230 | IS USED AS |
| | | \rightarrow | PART/PROCESS SPEC USE | 255 | HAS |
| | | \rightarrow | SERIALIZED PART INSTANCE | 147 | APPEARS AS |
| | | $ \diamond $ | APPRVD PART SOURCE | 177 | IS SUPPLIED BY |
| | | \rightarrow | MATERIAL RECEIPT | 87 | HAS |
| | | \leftarrow | SECTION | 363 | IS |
| | | \rightarrow | WORK PACKAGE | 380 | HAS |
| | | | PROCESS PLAN | 415 | MANUFACTURE IS DESCRIBED BY |
| | | | END ITEM | 5 | IS |
| | | $ \longrightarrow $ | PART TOOL REQ'MT | 340 | HAS |
| | | $ \longrightarrow $ | PART REQ'MT FOR MAT'L | 397 | HAS |
| | | | SCHED PART | 409 | APPEARS AS |
| | | | END ITEM REQ'MT FOR PART | 387 | SATISFIES |
| | | | CONFIGURED ITEM | 367 | IS |
| 1 | | | MFG REQ'ST | 88 | IS REQUESTED BY |
| | | | PROCESS PLAN MAT'L CALLO | UT 74 | IS USED AS |
| - 1 | | $ \rightarrow $ | STOCK LOC USE FOR PART | 227 | IS STORED AT |
| | | $ \rightarrow $ | REQ'ST PURCH PART | 175 | APPEARS AS |
| | | \rightarrow | STD RTG USE | 254 | HAS |
| | | \leftarrow | IMAGE PART | 300 | HAS |
| - 1 | | \leftarrow | IMAGE PART | 300 | IS |
| DE: | TITLE: | | | | IAMANDE O |
| | RELA | TED ENTI | TY CLASS NODE CROSS RE | FERENC | NUMBER: |

| | ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | | RELATION CLASS LABEL |
|------|--------------------|-------------------------|-------------------------|--------|----------------------|
| NO. | LABEL | | LABEL | NO. | |
| 6 | PART (Continued) | | PART DRAWING | 181 | HAS |
| | | | SUPPLIER QUOTE | 91 | IS SUBJECT OF |
| | | $ \diamond $ | BOM ITEM | 68 | IS SPECIFIED BY |
| 12 | RELEASED ENGRN DWG | | ENGRN RELEASE | 69 | AUTHORIZES USE OF |
| | | ◇ — | ACTIVITY POLICY | 346 | IS USED BY |
| | | ◇ — | DRAWING | 414 | IS CALLED OUT AS |
| | | \rightarrow | PART | 6 | DEFINES |
| | | \rightarrow | TOOL DRAWING | 42 | IS USED AS |
| | | \rightarrow | DWG APPLIC TO CONTRACT | 345 | HAŞ |
| | | \rightarrow | ENGRN CHG ITEM | 119 | IS AFFECTED BY |
| 1 | | \rightarrow | ENGRN DWG CHANGE | 123 | IS REVISED BY |
| | | \rightarrow | ENGRN BOM DWG CALLOUT | 130 | IS USED AS |
| 1 | | - | REFERENCE DWG | 134 | HAS |
| | | ─ ◆ | REFERENCE DWG | 134 | IS |
| | | $ \rightarrow \rangle$ | PART DRAWING | 181 | IS USED AS |
| 1 | | | ENGRN CHG REQ'ST | 354 | IS REFERENCED BY |
| 11 | | $ \rightarrow \rangle$ | DWG MAT'L CALLOUT | 385 | CALLS OUT |
| 1 | | | END ITEM REQ'MT FOR DWG | 390 | SATISFIES |
| | | | CHG REQ'ST DWG CALLOUT | 393 | IS IMPACTED BY |
| 1 | | - | PLANNING PARTS LIST | 396 | IS REFERENCED BY |
| | | $ -\diamond $ | DWG APPLIC TO BASLN | 404 | HAS |
| | | | | | |
| ODE: | TITLE: | ATED ENT | ITTY CLASS NODE CROSS R | CEEDEN | NUMBER: |

| NO. I | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------------|-------------------------|----------------------------|---------|----------------------|
| 13 | ENGRN SPEC | 0- | ENGRN RELEASE | 69 | AUTHORIZES USE OF |
| | | - | PART SPEC | 120 | IS USED AS |
| | | ~ | TOOL SPEC | 41 | IS USED FOR |
| | | $-\check{\circ}$ | ENGRN SPEC CHG | 126 | |
| 1 | | | REFERENCE SPEC | 302 | IS REVISED BY HAS |
| - 1 | | | REFERENCE SPEC | 302 | IS |
| | | _ | QA NEED | 322 | |
| | | | EQUIPMENT SPEC | 161 | DEFINES |
| | | | MFG PROCESS SPEC | | IS USED FOR |
| 1 | | $-\overset{\sim}{\sim}$ | | 162 | IS USED IN |
| | ENGRN CHANGE | $\stackrel{\sim}{\sim}$ | FACILITY SPEC | 413 | IS USED FOR |
| 14 | | | ENGRN BOM SPEC CALLOUT | 296 | IS USED AS |
| 14 | | $\overline{}$ | APPVD ENGRN ORDER | 361 | IS |
| 19 | DIRCHASED TIEM DEMORY ODE | ~> | ENGRN CHG TTEM | 119 | CONTAINS |
| 20 | PURCHASED ITEM REWORK ORD | | DELIVERY REJECTION | 266 | RESULTS IN |
| 22 | PURCHASED ITEM SCRAP ORDE | | DELIVERY REJECTION | 266 | RESULTS IN |
| 22 | PURCHASE REQUEST | \Diamond | EMPLOYEE | 116 | ISSUES |
| | | \rightarrow | PURCH. REQ. ITEM | 23 | IS FOR |
| | | \rightarrow | PURCH. REQ. CHANGE | 24 | IS MODIFIED BY |
| 19 | | \rightarrow | PURCH. REQ. APPROVAL | 171 | HAS |
| | | \leftarrow | CONTRACT PURCH. REQ. | 172 | IS |
| 1 | | | | | |
| | | | | | |
| DDE: | TITLE: | | | | INUMBER: |
| | | TED ENT | ITY CLASS NODE CROSS R | EFERENC | CE INOMBER: |

| NO. | LABEL | R.C. | RELATED ENTITY CLASS LABEL | | RELATION CLASS LABEL |
|------|--------------------------|---------------|-----------------------------------|---------|----------------------|
| 23 | | ^ | COST ACCOUNT | NO. | |
| 25 | 23 PURCHASE REQUEST ITEM | × | | 4 | IS ASSIGNED TO |
| | | ~ | PURCH REQ'ST | 22 | IS FOR |
| | | \sim | SUPPLIER QUOTE REQ | 90 | RESULTS IN |
| 1 | | \sim | REQUESTED SUPPLIER | 173 | HAS |
| | | \rightarrow | PURCH REQ ITEM CHG EFFE | | IS REVISED BY |
| | | \rightarrow | BUYER ASSIGN | 196 | APPEARS AS |
| 1 | | \rightarrow | PURCH REQ ITEM UNIT OF MEASURE | 313 | HAS |
| | | \rightarrow | PURCH REQ DELIVERY REQ | MT 314 | HAS |
| - 1 | | \rightarrow | WBS USE FOR PURCH REQ 1 | TEM 311 | IS ASSIGNED |
| 1 | | \rightarrow | REQUESTED CARRIER | 176 | HAS |
| | | \leftarrow | REQUESTED PURCH PART | 175 | IS FOR |
| 24 | PURCHASE REQUEST CHANGE | ◇ — | PURCHASE REQUEST | 22 | IS MODIFIED BY |
| | | \Diamond | EMPLOYEE | 116 | ISSUES |
| | | \rightarrow | PURCH REQ CHANGE APPROV | AL 194 | HAS |
| | 1 4 | \rightarrow | PURCH REQ ITEM CHG EFFE | CT 195 | HAS |
| 25 | BUYER | \rightarrow | EMPLOYEE | 116 | PERFORMS AS |
| | | \rightarrow | PURCH ORDER | 26 | ISSUES |
| | | \rightarrow | PURCH ORDER CHANGE | 28 | ISSUES |
| 1 | | \rightarrow | SUPPLIER QUOTE REQ | 90 | ISSUES |
| | | \rightarrow | BUYER ASSIGNMENT | 196 | HAS |
| | | | | | |
| ODE: | TITLE: | | ITY CLASS NODE CROSS R | | NUMBER: |

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | | RELATION CLASS LABEL |
|-----|----------------------------|-----------------------|--|----------|--------------------------|
| | PURCHASE ORDER | _ | A STATE OF THE STA | NO. | RELATION CLASS LABEL |
| 26 | FUNCHASE URDER | ◇ | BUYER | 25 | ISSUES |
| | | | PURCH ORDER ITEM | 27 | IS FOR |
| | | | PURCH ORDER CHANGE | 28 | IS MODIFIED BY |
| | | \leftarrow | ASSIGNED SUPPLIER | 186 | IS ASSIGNED TO |
| | | \rightarrow | PURCH ORDER APPROVAL | 191 | HAS |
| | | \leftarrow | CONTRACT PURCH ORDER | 192 | IS |
| | | \rightarrow | ASSIGNED CARRIER | 193 | IS ASSIGNED TO |
| 27 | PRUCHASE ORDER ITEM | ◇ | COST ACCOUNT | 4 | IS CHARGED FOR |
| ı | | | PURCHASE ORDER | 26 | IS. FOR |
| - 1 | | $ \rightarrow $ | SUPPLIER DELIVERY ITEM | 139 | RESULTS IN |
| | | $ \leftarrow $ | ORDERED PART | 188 | IS FOR |
| | | | PURCH ORDER ITEM CHG EFFECT | 197 | IS REVISED BY |
| 148 | | $ \longrightarrow $ | PURCH ORDER ITEM DEL REC | QMT 315 | HAS |
| | | | WBS USE FOR PURCH ORDER ITEM | 317 | IS ASSIGNED |
| | | | PURCH ORDER ITEM UNIT OF MEASURE | 316 | HAS |
| 28 | PURCHASE ORDER CHANGE | | BUYER PURCH ORDER | 25 26 | ISSUES IS MODIFIED BY |
| | | | PURCH ORDER ITEM CHANGE EFFECT | 197 | HAS |
| | | | PURCH ORDER CHG APPROVAL | 199 | HAS |
| DE: | TITLE: | | | | |
| | RELA | TED ENTI | TY CLASS NODE CROSS RI | FEEDENC | NUMBER: |

| 30 CANDIDATE SUPPLIER 31 QUALIFIED SUPPLIER 32 SUPPLIER DELIVERY 41 TOOL SPEC | \leftarrow | | NO. | RELATION CLASS LABEL |
|--|----------------|--------------------------------------|-----|----------------------|
| 32 SUPPLIER DELIVERY | | QUALIFIED SUPPLIER | 31 | IS |
| 32 SUPPLIER DELIVERY | > | SUPPLIER QUOTE REQ | 90 | RECEIVES |
| 32 SUPPLIER DELIVERY | | SUPPLIER QUOTE | 91 | ISSUES |
| 32 SUPPLIER DELIVERY | > | SUPPLIER INVOICE | 107 | ISSUES |
| 32 SUPPLIER DELIVERY | ─ ◇ | REQUESTED SUPPLIER | 173 | IS |
| 32 SUPPLIER DELIVERY | ─ ◆ | APPROVED PART SOURCE | 177 | IS USED AS |
| 32 SUPPLIER DELIVERY | \rightarrow | CANDIDATE SUPPLIER/PURCH REQ ITEM | 174 | IS USED AS |
| 32 SUPPLIER DELIVERY | → | ASSIGNED SUPPLIER | 186 | IS USED AS |
| | \rightarrow | CANDIDATE SUPPLIER | 30 | IS |
| 41 TOOL SPEC | ◇ | ASSIGNED SUPPLIER | 186 | AUTHORIZES |
| 41 TOOL SPEC | ` → | SUPPLIER DELIVERY ITEM | 139 | CONTAINS |
| 41 TOOL SPEC | \leftarrow | DELIVERING CARRIER | 274 | IS DELIVERED BY |
| | ◇ — | ENGRN SPEC | 13 | IS USED FOR |
| | \rightarrow | TOOL TYPE | 45 | CONFORMS TO |
| | | CUST TOOL CONFORM CERT | 249 | IS USED AS |
| | | OWNED TOOL CONFORM CERT | 250 | IS USED AS |
| | | TOOL SPEC CALLOUT | 252 | SATISFIES |
| 42 TOOL DRAWING | ◇ — | REL ENGRN DWG | 12 | IS USED AS |
| | ♦— | TOOL TYPE | 45 | HAS |
| | → | TOOL DWG CALLOUT | 303 | SATISFIES |
| | | | | |
| ODE: TITLE: | | II FITY CLASS NODE CROSS R | | NUMBER: |

| NO. | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | S | |
|-----|--------------------------|-------------------------|---------------------------|--------|---------------------------|
| 45 | LABEL | | LABEL | NO. | RELATION CLASS LABEL |
| 45 | TOOL TYPE | - | TOOL SPEC | 41 | CONFORMS TO |
| | | | TOOL DRAWING | 42 | HAS |
| | | \rightarrow | OPER TOOL CALLOUT | 47 | HAS |
| | | \rightarrow | CUST TOOL TYPE | 284 | IS |
| | | \leftarrow | COMPANY TOOL TYPE | 285 | IS |
| | | \rightarrow | TOOL SKILL REQ'MT | 290 | REQUIRES |
| 47 | 0050 | \rightarrow | STATION TOOL LOC | 291 | IS CURRENTLY AVAILABLE AT |
| 47 | OPER TOOL CALLOUT | \Diamond | PLANNED MFG OPER | 421 | HAS |
| | | ◇ — | TOOL TYPE | 45 | HAS |
| | | $ \leftarrow $ | CUST TOOL CALLOUT | 244 | IS |
| | | $ \leftarrow $ | COMPANY TOOL CALLOUT | 247 | IS |
| - 4 | | $ \rightarrow \rangle$ | TOOL SPEC CALLOUT | 252 | REQUIRES |
| | | $ \rightarrow $ | TOOL DWG CALLOUT | 303 | REQUIRES |
| | | $ \leftarrow $ | REQ'MT FOR CUST TOOL TYPE | E 286 | IS |
| | Andrew Street and Street | $ \leftarrow $ | REQ'MT FOR OWNED TOOL TY | PE 288 | IS |
| 51 | EQUIPMENT | | EQUIP CALLOUT | 98 | HAS |
| | | | EQUIP SPEC | 161 | CONFORMS TO |
| | | | EQUIP SKILL REQ'MT | 237 | REQUIRES |
| - 1 | | | STATION EQUIP LOC | 240 | IS CURRENTLY AVAILABLE AT |
| | | | CUST EQUIP TYPE | 278 | IS |
| | | \leftarrow | OWNED EQUIP TYPE | 279 | IS |
| | | | ORGANIZATION EQIP REQ'MI | 342 | SATISFIES |
| DE: | Itiri a | | | | |
| | TITLE: | ATED ENTI | TY CLASS NODE CROSS R | | NUMBER: |

RELATED ENTITY CLASS NODE CROSS REFERENCE

RELATED ENTITY CLASS

NO.

LABEL

R.C.

68

NO.

SUBJECT ENTITY CLASS LABEL

LABEL

8 September 1983

RELATION CLASS LABEL

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLAS LABEL | NO. | RELATION CLASS LABEL |
|------|-----------------------------|-----------------------------|----------------------------|-----|-----------------------------|
| 79 | RESOURCE PLAN | ◇ — | CONTRACT ITEM | 114 | RESULTS IN |
| | | ◇ — | MFG PROJECT PLAN | 336 | CONTAINS |
| | | ◇ — | ACTIVITY POLICY | 346 | CONSTRAINS |
| | | \rightarrow | RESOURCE NEED | 399 | IDENTIFIES REQUIREMENTS FOR |
| 1 | | | MFG REQUEST | 88 | RESULTS IN |
| | | - | MATERIAL PLAN | 370 | IS |
| | | - | MANPOWER PLAN | 371 | IS |
| | | - | TOOLING PLAN | 372 | IS |
| | | \leftarrow | FACILITIES PLAN | 373 | IS |
| | | \leftarrow | Q.C. PLAN | 374 | IS |
| | | - | EQUIPMENT PLAN | 375 | IS |
| 81 | SALES CONTRACT | ◇ — | CUSTOMER | 1 | AGREES TO |
| 1 | | ◇ — | PROGRAM | 347 | IS DEFINED BY |
| | | \rightarrow | SALES ORDER | 2 | RESULTS IN |
| | | \rightarrow | CONTRACT PURCH REQ | 172 | RESULTS IN |
| | | ─ ◇ | CONTRACT REVISION | 84 | HAS |
| - 1 | | \rightarrow | CONTRACT PURCH ORD | 192 | RESULTS IN |
| 1 | | \rightarrow | CONTRACT ITEM | 114 | HAS |
| - 1 | | $ \longrightarrow \rangle$ | CONTRACT PROD ORDER | 223 | RESULTS IN |
| - 1 | | $ \longrightarrow \rangle$ | STATEMENT OF WORK | 331 | RESULTS IN |
| | | $ \longrightarrow \rangle$ | ENGRN CHG PROPOSAL | 332 | IS REFERENCED BY |
| | | $ \!\!\!\diamond $ | CUST TOOL | 243 | SPECIFIES |
| ODE: | TITLE: | TED ENT | | | NUMBER: |

| NO. I | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------------|------------------|-----------------------------|-----|---------------------------|
| 81 | SALES CONTRACT (Cont.) | 4 | MFG PROJ PLAN | 336 | IS BASIS FOR |
| | | \rightarrow | PROJECT | 348 | IS COMPOSED OF |
| | | - | DWG APPLIC TO CONTRACT | 345 | HAS |
| 1 | | \rightarrow | TYPE-VERSION SHIP | 349 | AUTHORIZES MANUFACTURE OF |
| 84 | CONTRACT REVISION | ◇ — | sales contract | 81 | HAS |
| 87 | MATERIAL RECEIPT | ◇ | PART | 6 | HAS |
| 88 | MFG REQ'ST | ◇ — | PART | 6 | IS REQUESTED BY |
| | | ◇ — | resource plan | 79 | RESULTS IN |
| | | | PROD ORDER | 57 | RESULTS IN |
| | | $ \leftarrow $ | PART LOT | 93 | DEFINES |
| 89 | MATERIAL ISSUE | ◇ — | PART | 6 | HAS |
| 90 | SUPPLIER QUOTE REQ'ST | ◇ | PART | 6 | IS SUBJECT OF |
| | | ├ | PURCH REQ ITEM | 23 | RESULTS IN |
| | | ◇ — | BUYER | 25 | ISSUES |
| - 1 | | | CANDIDATE SUPPLIER | 30 | RECEIVES |
| | | | ORIGINATING QUOTE REQ | 298 | IS |
| 91 | SUPPLIER QUOTATION | | PART | 6 | IS SUBJECT OF |
| - 4 | | ◇ — | CANDIDATE SUPPLIER | 30 | ISSUES |
| | | $ \leftarrow $ | ORIGINATING QUOTE REQ | 298 | HAS |
| 92 | CONFORMANCE CERT | $ \diamond - $ | INSPECTOR | 214 | ISSUES |
| | | \leftarrow | SER PART CONFORM CERT | 213 | IS |
| | | \leftarrow | PART LOT CONFORM CERT | 215 | IS |
| DE: | TITLE: | | ITY CLASS NODE CROSS R | | NUMBER: |

_

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-----|----------------------------|----------------|------------------------------------|-----|----------------------|
| 98 | EQUIPMENT CALLOUT | ♦ | EQUIPMENT | 51 | HAS |
| | | <u>~</u> | PLANNED MFG OPER | 421 | HAS |
| | | - | EQUIP SPEC CALLOUT | 251 | REQUIRES |
| | 1 | → | CUST EQUIP RQMT | 257 | RESULTS FROM |
| | | \rightarrow | OWNED EQUIP RQMT | 261 | RESULTS FROM |
| | | + | RQMT/CUST EQUIP TYPE | 280 | RESULTS FROM |
| | | \leftarrow | RQMT/OWNED EQUIP TYPE | 282 | RESULTS FROM |
| 100 | STATION | ◇ — | ORGANIZATION | 422 | IS COMPRISED OF |
| | | \rightarrow | MACHINE | 56 | CONTAINS |
| | | \rightarrow | OPERATOR STATION ASSIGN | 66 | IS USED AS |
| | | \rightarrow | PLANNED MFG OPER | 421 | PERFORMS |
| 1 | | \rightarrow | STATION EQUIP LOC | 240 | CONTAINS |
| | | → > | STATION/PROCESS | 242 | PERFORMS |
| ı | | | STATION/TOOL LOC | 291 | CONTAINS |
| | | \rightarrow | STATION CALLOUT | 350 | HAS |
| | | \rightarrow | INDEX | 351 | HAS ASSIGNED TO IT |
| 105 | SKILL CERTIFICATION | - - | EMPLOYEE | 116 | HAS |
| 100 | | ◇ — | EMPLOYEE SKILL | 236 | IS EVIDENT AS |
| 106 | APPROVED CARRIER | | APPROVED CARRIER/PURCH REQ ITEM | 179 | IS USED AS |
| 1 | | | APPROVED PART CARRIER | 180 | IS USED AS |
| | | | ASSIGNED CARRIER | 193 | IS SELECTED FOR |
| DE: | TITLE: | | ITY CLASS NODE CROSS R | | NUMBER: |

| UBJEC | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------------|-------------------------|-----------------------------|---------|----------------------------|
| 107 | SUPPLIER INVOICE | ◇ — | CANDIDATE SUPPLIER | 30 | ISSUES |
| 109 | DEVIATION WAIVER | ◇ | DELIVERY REJECTION | 266 | RESULTS IN |
| 113 | SUPPLIER RETURN | ◇ — | DELIVERY REJECTION | 266 | RESULTS IN |
| 114 | CONTRACT ITEM | ◇ — | sales contract | 81 | HAS |
| | | → | END ITEM | 5 | REQUIRES |
| | | → | resource plan | 79 | RESULTS IN |
| | | | SALES ORDER ITEM/CON ITE | м 304 | IS REFERENCED BY |
| | h l | -> | CONFIG BASLN | 352 | GENERATES |
| | | $ \rightarrow \rangle$ | MILESTONE | 353 | ESTABLISHES PARAMETERS FOR |
| 116 | EMPLOYEE | ◇ — | ORGANIZATION | 422 | IS COMPRISED OF |
| | | → | SKILL CERT | 105 | HAS |
| | | \leftarrow | PURCH REQ APPVL AUTH | 170 | HAS |
| | 1 | | PURCH REQ | 22 | ISSUES |
| | | \leftarrow | PURCH ORD APPVL AUTH | 183 | HAS |
| | | → | PURCH REQ CHG | 24 | ISSUES |
| | | - | INSPECTOR | 214 | PERFORMS AS |
| | | - | BUYER | 25 | PERFORMS AS |
| | | 4 | PROD ORDER APPVL AUTH | 217 | HAS |
| | R1 | - | OPERATOR | 53 | PERFORMS AS |
| | | - | MFG PLANNER | 219 | PERFORMS AS |
| | | - | PROCESS PLANNER | 418 | PERFORMS AS |
| | | | | | |
| DE: | TITLE: | ATED ENT | TITY CLASS NODE CROSS F | REFEREN | NUMBER: |

| 0. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-----|----------------------------|-------------------|----------------------------|---------|----------------------|
| 118 | ENGRN BOM | \rightarrow | END ITEM | 5 | HAS |
| | 4 | → | ENGRN BOM ITEM | 68 | IS MADE UP OF |
| 19 | ENGRN CHG ITEM | ◇ — | ENGRN CHANGE | 14 | CONTAINS |
| | | ◇ — | RELEASED ENGRN DWG | 12 | IS AFFECTED BY |
| | 4. | \leftarrow | ENGRN SPEC CHANGE | 126 | IS |
| | 10 | \leftarrow | ENGRN DWG CHANGE | 123 | IS |
| 20 | PART SPEC | ◇ — | PART | 6 | CONFORMS TO |
| i | | ◇ — | ENGRN SPEC | 13 | IS USED AS |
| | | \rightarrow | COMP PART SPEC CALLOUT | 157 | IS USED AS |
| - 1 | | \rightarrow | SPEC USE/REQ PART | 178 | IS USED AS |
| | | → | PURCH ORDER SPEC CALLOU | 190 | IS REQUIRED BY |
| - 1 | | $ \rightarrow $ | SER PART CONFORM CERT | 213 | IS USED FOR |
| | | | PART LOT CONFORM CERT | 215 | IS USED FOR |
| | | $ \rightarrow $ | RAW MATL SPEC CALLOUT | 225 | IS USED AS |
| | | \leftarrow | PART SPEC RQMT | 324 | DEFINES |
| 23 | ENGRN DWG CHANGE | ├ | RELEASED ENGRN DWG | 12 | IS REVISED BY |
| | | \rightarrow | ENGRN CHANGE ITEM | 119 | IS |
| 26 | ENGINEERING SPEC CHANGE | \Diamond | ENG SPECIFICATION | 13 | IS REVISED BY |
| | | \rightarrow | ENG CHANGE ITEM | 119 | IS |
| 0 | ENGRN BOM DRAW CALLOUT | ◇ | RELEASED ENGRN DWG | 12 | IS USED AS |
| | | \rightarrow | ENGRN BOM ITEM | 68 | SPECIFIES |
| | TITLE: | | | | |
| | | TED ENT | TY CLASS NODE CROSS RI | FFFRFNC | NUMBER: |

| SUBJEC NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|---------------|-----------------------------|---------------|----------------------------|----------|--------------------------|
| 131 | ROUTING ITEM | | RTG ITEM/STD RTG | 417 | HASS |
| 151 | NOOTING TIEN | ~ × | N.C. PGM CALLOUT | 319 | IS |
| | | \rightarrow | PROCESS SPEC CALLOUT | 256 | HAS |
| | | | STATION CALLOUT | 350 | HAS |
| | ") | ~ | METHOD USE | 364 | IS EMPLOYED IN |
| | | _Š | CUTTING SPEC CALLOUT | 392 | REFERENCES |
| | | ~ | VISUAL AID CALLOUT | 395 | REFERENCES |
| 132 | SALES ORDER ITEM | ~ | SALES ORDER | 2 | CONTAINS |
| -30 | | \rightarrow | SALES ORDER ITEM/CON IT | EM 304 | REFERENCES |
| 134 | REFERENCE DWG | <u>~</u> | REL ENGRN DWG | 12 | HAS |
| | | ŏ— | REL ENGRM DWG | 12 | IS |
| 139 | SUPPLIER DELIVERY ITEM | \Diamond | PURCH ORDER ITEM | 27 | RESULTS IN |
| | | ◇ — | SUPPLIER DELIVERY | 32 | CONTAINS |
| | | \leftarrow | DELIVERY REJECTION | 266 | RESULTS IN |
| | | \leftarrow | DELIVERY CONFORM CERT | 267 | RESULTS IN |
| 140 | OPERATOR/MACHINE ASSIGN | ◇ — | OPERATOR | 53 | IS CURRENTLY OPERATING |
| | | ← | MACHINE | 56 | IS CURRENTLY ASSIGNED TO |
| 147 | SERIALIZED PART INSTANCE | ◇ — | PART | 6 | APPEARS AS |
| 37.53 | | \rightarrow | SER RAW MATL ROMT | 209 | SATISFIED |
| | 0.1 | \rightarrow | SER PART CONFORM CERT | 213 | HAS |
| | | \leftarrow | SER PART/SOURCE LOT | 222 | IS TRACEABLE TO |
| | | \leftarrow | SER COMP PART RQMT | 233 | SATISFIES |
| DDE: | TITLE: | | | | NUMBER: |
| | RELA | TED ENT | TITY CLASS NODE CROSS | REFERENC | CE |

8 September

8 September 19

| 0. | CT ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS | NO. | RELATION CLASS LABEL | _ |
|------|--|---------------|-------------------------|---------|----------------------|---|
| 179 | APPROVED CARRIER USE FOR PURCH REQ ITEM | ◇ — | APPROVED CARRIER | 106 | IS USED AS | |
| | | \rightarrow | REQUESTED CARRIER | 176 | IS | |
| 180 | APPROVED PART CARRIER | | PART | 6 | IS TRANSPORTED BY | |
| | | ◇ — | APPROVED CARRIER | 106 | IS USED AS | |
| 181 | PART DRAWING | ◇ — | PART | 6 | HAS | |
| | | ◇ — | RELEASED ENG DWG | 12 | IS USED AS | |
| | 7 b | \rightarrow | COMP PART DWG CALLOUT | 153 | IS USED AS | |
| ļ | | \rightarrow | DWG USE/REQ PART | 182 | IS USED AS | |
| | | | PURCH OLD DWG CALLOUT | 189 | IS REQUIRED BY | |
| | | | RAW MATL DWG CALLOUT | 212 | IS USED AS | |
| | | | PROC PLAN PART DWG CALL | OUT 324 | IS USED AS | |
| 82 | FNORM RUG | \leftarrow | PART SPEC RQMT | 324 | CONFORMS TO | |
| 02 | ENGRN DWG USE FOR REQ I | PART | REQ PURCH PART | 175 | REQUIRES | |
| 83 | DIDON ODDED ADDROVAL AV | | PART DRAWING | 181 | IS USED AS | |
| ا ده | PURCH ORDER APPROVAL AU | 114 | EMPLOYEE | 116 | HAS | |
| | | | PURCH ORDER APPROVAL | 191 | ALLOWS | |
| | | | PURCH ORDER CHG APPROVA | | LLOWS | |
| | | | SER SUPPLIER PT SOURCE | OT 323 | IS TRACEABLE BY | |
| 36 | ASSIGNED SUPPLIER | \rightarrow | PURCH ORD | 26 | IS ASSIGNED TO | |
| | | ◇ — | CANDIDATE SUPPLIER | 30 | IS USED AS | |
| | | > | SUPPLIER DELIVERY | 32 | AUTHORIZES | |
| | TITLE: | | | | - Lunes | |
| | REL | ATED ENTI | TY CLASS NODE CROSS R | EEEDENG | NUMBER: | |

00

| JEC | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-----|---|-------------------------|-----------------------------|----------|----------------------|
| 87 | RQSTD PURCH PART TRACE. | ◇ — | REQ PURCH PART | 175 | HAS |
| | | ŏ — | ordered part | 188 | HAS |
| 188 | ORDERED PART | ◇ — | PART | 6 | APPEARS AS |
| | 1 | \rightarrow | PURCH ORDER ITEM | 27 | IS FOR |
| | | - | REQ PURCH PART TRACE. | 187 | HAS |
| | 2 | \rightarrow | PURCH ORDER DRW CALLOUT | 189 | REQUIRES |
| | l | - | PURCH ORDER SPEC CALLOUT | 190 | REQUIRES |
| | | \rightarrow | PURCH PART REJECT | 268 | IS SUBJECT OF |
| | | → | PURCH PART CONFM CERT | 269 | IS SUBJECT OF |
| 189 | PURCH ORDER DWG CALLOUT | ◇ — | PART DRAWING | 181 | IS REQUIRED BY |
| | | ◇ — | ORDERED PART | 188 | REQUIRES |
| | | \rightarrow | PURCH PART DWG NON-CONFN | 271 | IS USED FOR |
| | | $ \rightarrow \rangle$ | PURCH PART DWG CONFM | 273 | IS USED FOR |
| 190 | PURCH ORDER SPEC CALLOUT | ◇ — | PART SPEC | 120 | IS REQUIRED BY |
| | | ◇ — | ORDERED PART | 188 | REQUIRES |
| | | $ \rightarrow \rangle$ | PURCH PART SPEC NON-CONFM | 270 | IS USED FOR |
| | | → | PURCH PART SPEC CONFM | 272 | IS USED FOR |
| 191 | PURCH ORDER APPROVAL | ◇ — | PURCH ORDER | 26 | HAS |
| | | ◇ — | PURCH ORDER APPROVAL AUTH | 183 | ALLOWS |
| 192 | CONTRACT PURCH ORDER | \rightarrow | PURCHASE ORDER | 26 | IS |
| | | ◇ — | sales contract | 81 | RESULTS IN |
| | | | | | |
| DE: | TITLE: | | TITY CLASS NODE CROSS R | T. T. V. | NUMBER: |

| NO. | LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|---|-------------------|----------------------------|--------|----------------------|
| 193 | ASSIGNED CARRIER | \Diamond — | PURCH ORDER | 26 | IS ASSIGNED TO |
| | 40 | ◇ — | APPROVED CARRIER | 106 | IS SELECTED TO |
| | | \rightarrow | ASGN CARRIER/DELIV CARRI | ER 275 | IS |
| 194 | PURCH REQ CHG APPROVAL | ◇ — | PURCH REQ CHANGE | 24 | HAS |
| | | ◇ — | PURCH REQ APPROVAL AUTH | 170 | ALLOWS |
| 195 | PURCH REQ ITEM CHANGE EFFECTIVITY | ◇ — | PURCH REQ ITEM | 23 | IS REVISED BY |
| | | ◇ — | PURCH REQ CHANGE | 24 | HAS |
| | | → > | PURCH ORD ITEM CHG TRACE | 198 | RESULTS IN |
| 196 | BUYER ASSIGNMENT | ◇ — | PURCH REQ ITEM | 23 | APPEARS AS |
| | | ├ | BUYER | 25 | HAS |
| 197 | PURCH ORDER ITEM CHANGE EFFECTIVITY | \diamond — | PURCH ORDER ITEM | 27 | IS REVISED BY |
| | | ◇ — | PURCH ORDER CHANGE | 28 | HAS |
| | | $ \rightarrow $ | PURCH ORD ITEM CHG TRACE | 198 | RESULTS IN |
| 198 | PURCH ORDER ITEM CHANGE TRACEABILITY | ├ | PURCH ORDER ITEM CHANGE | 195 | RESULTS IN |
| | | \diamond | PURCH ORD ITEM CHG EFFECT | 197 | RESULTS IN |
| 199 | PURCH ORDER CHANGE APPROVA | r♦— | PURCH ORDER CHANGE | 28 | HAS |
| | | ◇ — | PURCH ORDER APPROV AUTH | 183 | ALLOWS |
| 209 | SER RAW MATL RQMT | ◇ — | SER PART INSTANCE | 147 | SATISFIES |
| | | ├ | PROC PLAN MATL C/O | 74 | IS |
| IODE: | TITLE: | | ITY CLASS NODE CROSS R | | INUMBER: |

| | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | NA | RELATION CLASS LABEL |
|-------|---|---------------|---------------------------|---------|----------------------|
| NO. | LABEL | ^ | LABEL COLLOIT | NO. | IS |
| 211 | RAW MATL LOT RQMT | <u></u> | PROCESS PLAN MATL CALLOUT | | |
| | | ◇ | PART LOT | 93 | SATISFIES |
| 212 | RAW MATL DWG CALLOUT | \rightarrow | PROCESS PLAN MATL CALLOUT | 100000 | SPECIFIES |
| | | ◇ | PART DWG | 181 | IS USED AS |
| 213 | SER PART CONFORMANCE CERT | \rightarrow | CONFORM CERT | 92 | IS |
| | | ◇ — | PART SPEC | 120 | IS USED FOR |
| | | ◇ — | SER PART INSTANCE | 147 | HAS |
| 214 | INSPECTOR | \rightarrow | EMPLOYEE | 116 | PERFORMS AS |
| | | \rightarrow | CONFORMANCE CERT | 92 | ISSUES |
| | | \rightarrow | DELIVERY REJECTION | 266 | ISSUES |
| 215 | PART LOT CONFORMANCE CERT | \rightarrow | CONFORMANCE CERT | 92 | IS |
| | | ◇ — | PART LOT | 93 | HAS |
| | | ◇ — | PART SPEC | 120 | IS USED FOR |
| 217 | PROD ORDER APPROVAL AUTH | ->- | EMPLOYEE | 116 | HAS |
| | | → | PROD ORDER APPROVAL | 218 | ALLOWS |
| 218 | PRODUCTION ORDER APPROVAL | | PROD ORDER | 57 | HAS |
| 210 | , | ŏ | PROD ORDER APPOVAL AUTH | 217 | ALLOWS |
| 219 | MANUFACTURING PLANNER | | EMPLOYEE | 116 | PERFORMS AS |
| 217 | PINIO ACTORING I ENWER | | PROD ORDER | 57 | ISSUES |
| 220 | STD RTG CALLOUT | V | PROCESS PLAN | 415 | SPECIFIES |
| 220 | SID KIG CALLOOT | | STD RTG USE | 254 | ALLOWS FOR |
| | | V | SID KIG OSE | | |
| | | | | | |
| NODE: | TITLE: | | | | NUMBER: |
| | RELA | TED EN | TITY CLASS NODE CROSS F | REFEREN | NCE |

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------------------|--------------------|-----------------------------|---------|----------------------|
| 221 | PART LOT ASSIGNMENT | | PRODUCTION ORDER | 57 | HAS |
| 221 | TANT LOT ASSIGNATION | <u>~</u> | PART LOT | 93 | IS PRODUCED AS |
| 222 | SERIALIZED PART SOURCE LO | ŏ— | PART LOT | 93 | IS TRACEABLE TO |
| | SENTALIZED FAIN SOURCE ES | \rightarrow | SERIALIZED PART INSTANC | 147 | IS TRACEABLE TO |
| 223 | CONTRACT PROD ORDER | \rightarrow | PRODUCTION ORDER | 57 | IS |
| | | ◇ | SALES CONTRACT | 81 | RESULTS IN |
| 224 | PROCESS PLAN PART DWG CALLOUT | \rightarrow | PROCESS PLAN | 415 | SPECIFIES |
| | | ◇ — | PART DRAWING | 181 | IS USED AS |
| 225 | RAW MATL SPEC CALLOUT | ◇ — | PROC PLAN MATL CALLOUT | 74 | SPECIFIES |
| | | ◇ — | PART SPECIFICATION | 120 | IS USED AS |
| 226 | STOCK LOCATION | \rightarrow | STOCK LOC USE/PART | 227 | IS USED AS |
| 227 | STOCK LOCATION USE/PART | \$ | PART | 6 | IS STORED AT |
| | | \rightarrow | STOCK LOCATION | 226 | IS USED AS |
| | | \rightarrow | SER PART STOCK LOC | 228 | IS USED AS |
| | | \rightarrow | PART LOT STOCK LOC | 229 | IS USED AS |
| | | \rightarrow | SUP PART LOT STOCK LOC | 325 | IS USED AS |
| 228 | SER PART STOCK LOC | \rightarrow | SER PART INSTANCE | 147 | IS STORED AT |
| | | ◇ — | STOCK LOC USE/PART | 227 | IS USED AS |
| 229 | PART LOT STOCK LOC | \rightarrow | PART LOT | 93 | IS STORED AT |
| | | ← | STOCK LOC USE/PART | 227 | IS USED AS |
| IODE: | TITLE: | | | | NUMBER: |
| | RELA | TED ENT | TITY CLASS NODE CROSS F | REFEREN | CE |

| 233 S | COMPONENT PART CALLOUT SER COMP PART ROMT | 14448 | PART PROCESS PLAN COMP PART DWG CALLOUT COMP PART SPEC CALLOUT SER COMP PART CALLOUT | 6 415 153 157 | IS USED AS HAS REQUIRES REQUIRES |
|-------|--|--|--|------------------------|----------------------------------|
| | SER COMP PART RQMT | J1999 | COMP PART DWG CALLOUT COMP PART SPEC CALLOUT | 153 157 | REQUIRES |
| | SER COMP PART ROMT | ↓ ♦♦\$ | COMP PART SPEC CALLOUT | 157 | |
| | SER COMP PART ROMT | $\stackrel{\diamondsuit}{\Rightarrow}$ | | | REQUIRES |
| | SER COMP PART ROMT | \Rightarrow | SER COMP PART CALLOUT | | |
| | SER COMP PART ROMT | -0 | | 233 | HAS |
| | SER COMP PART RQMT | | COMP PART LOT ROMT | 234 | HAS |
| 234 C | | \rightarrow | SER PART INSTANCE | 147 | SATISFIES |
| 234 C | | ◇ — | COMPONENT PART CALLOUT | 230 | HAS |
| | COMP PART LOC RQMT | | PART LOT | 93 | SATISFIES |
| | | ◇ — | COMPONENT PART CALLOUT | 230 | HAS |
| 236 E | EMPLOYEE SKILL | \rightarrow | SKILL CERT | 105 | IS EVIDENT AS |
| | | \rightarrow | EQUIP SKILL RQMT | 237 | IS REQUIRED BY |
| | | → | PROCESS SKILL RQMT | 238 | IS REQUIRED BY |
| | | → | TOOL SKILL RQMT | 290 | IS REQUIRED BY |
| | | → | EMPLOYEE TRAINING | 326 | REQUIRES |
| 237 E | QUIP SKILL RQMT | ◇ | EQUIPMENT | 51 | REQUIRES |
| | | ◇ — | EMPLOYEE SKILL | 236 | IS REQUIRED BY |
| 238 P | PROCESS SKILL RQMT | ◇ | MFG PROCESS | 95 | REQUIRES |
| | | ← | EMPLOYEE SKILL | 236 | IS REQUIRED BY |
| 240 S | STATION EQUIP LOC | | EQUIPMENT | 51 | IS AVAILABLE AT |
| | | ├ ── | STATION | 100 | CONTAINS |
| DDE: | TTITLE: | | | | NUMBER: |

| SUBJEC NO. | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS LABEL | | RELATION CLASS LABEL |
|---------------|-------------------------------|-------------------------|-----------------------------|-------|--------------------------|
| NO. | LABEL STATION/PROCESS (Cont.) | | CUST EQUIP STATION ASSIG | NO. | IS |
| 242 | STATION TROCESS (CORC.) | $-\check{\diamond}$ | OWNED EQUIP STATION ASSI | | IS |
| 242 | STATION/PROCESS | <u></u> | MFG PROCESS | 95 | IS PERFORMED AT |
| | 5 m 20 w 1 m 30 2 30 | <u>~</u> | STATION | 100 | PERFORMS |
| 243 | CUSTOMER TOOL | <u>~</u> | SALES CONTRACT | 81 | SPECIFIES |
| | | ◇ — | CUSTOMER TOOL TYPE | 284 | IS SEEN AS |
| | | \rightarrow | CUST TOOL CALLOUT | 244 | HAS |
| | | \rightarrow | CUST TOOL CONFORM CERT | 249 | HAS |
| | | \leftarrow | CUST TOOL STATION ASSIGN | 292 | IS CURRENTLY ASSIGNED TO |
| | | $ \rightarrow \rangle$ | PART TOOL ROMT | 340 | SUPPORTS |
| | | \rightarrow | WBS ITEM TOOL RQMT | 344 | SUPPORTS |
| 244 | CUST TOOL CALLOUT | \rightarrow | OPER TOOL CALLOUT | 47 | IS |
| - 1 | | ◇ — | CUST TOOL | 243 | HAS |
| 246 | COMPANY TOOL | ◇ — | COMPANY TOOL TYPE | 285 | IS SEEN AS |
| 4 | | $ \longrightarrow $ | COMPANY TOOL CALLOUT | 247 | HAS |
| - 4 | | $ \rightarrow $ | COMPANY TOOL CONFORM CER | T 250 | HAS |
| 1 | | | COMP TOOL STATION ASSIGN | 293 | IS CURRENTLY ASSIGNED TO |
| 247 | COMPANY TOOL CALLOUT | \rightarrow | OPER TOOL CALLOUT | 47 | IS |
| 1.0 | | | COMPANY TOOL | 246 | HAS |
| 249 | CUST TOOL CONFORM CERT | $ \diamond $ | TOOL SPECIFICATION | 41 | IS USED AS |
| 1 | | | CONFORM CERT | 92 | IS |
| | | $ \diamond - $ | CUST TOOL | 243 | HAS |
| NODE: | TITLE: | <u> </u> | | | NUMBER: |

| SUBJEC NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|---------------|----------------------------|-------------------|----------------------------|--------|--------------------------|
| 250 | COMPANY TOOL CONFORM | ◇ — | TOOL SPEC | 41 | IS USED AS |
| | | \rightarrow | CONFORM CERT | 92 | IS |
| | | <u>\</u> | CO TOOL | 246 | HAS |
| 251 | EQUIP SPEC CALLOUT | <u>`</u> | EQUIP CALLOUT | 98 | REQUIRES |
| | | ◇ — | EQUIP SPEC | 161 | SATISFIES |
| 252 | TOOL SPEC CALLOUT | ◇ — | TOOL SPEC | 41 | SATISIFIES |
| | | ◇ — | OPER TOOL CALLOUT | 47 | REQUIRES |
| 254 | STD RTG USE | ◇ — | PART | 6 | HAS |
| | | ◇ — | STD ROUTING | 58 | HAS. |
| | | \rightarrow | STD RTG CALLOUT | 220 | ALLOWS FOR |
| 255 | PART/PROCESS SPEC USE | ◇ — | PART | 6 | HAS |
| | | ├ | MFG PROCESS SPEC | 162 | IS USED AS |
| | | \rightarrow | PROCESS SPEC CALLOUT | 256 | IS USED AS |
| 256 | PROCESS SPEC CALLOUT | ◇ — | ROUTING ITEM | 131 | HAS |
| | | ◇ — | PART/PROCESS SPEC | 255 | IS USED AS |
| 257 | CUSTOMER EQUIP RQMT | ◇ — | EQUIP CALLOUT | 98 | RESULTS FROM |
| | | ◇ — | CUST EQUIP INSTANCE | 259 | SATISFIES |
| 259 | CUST EQUIP INSTANCE | ◇ — | CUST EQUIP TYPE | 278 | IS SEEN AS |
| | | \rightarrow | CUST EQUIP RQMT | 257 | SATISFIES |
| | | $ \rightarrow $ | CUST EQUIP CONFORM CERT | 264 | HAS |
| | | \leftarrow | CUST EQUIP STATION ASSIGN | N 276 | IS CURRENTLY ASSIGNED TO |
| IODE: | TITLE: | | | | laumoro. |
| ODE. | | TED ENT | ITY CLASS NODE CROSS R | EFEREN | NUMBER: |

86

8 September 19

8 September 19

| NO. | CT ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLAS | | DELATION CLASS |
|-----|-----------------------------|---------------|---------------------------|-----|--------------------------|
| 275 | ASSIGN CARRIER USED | <u> </u> | LABEL ASSIGNED CARRIER | NO. | RELATION CLASS LABEL |
| | AS DELIVERING CARRIER | √ | MOSTUNED CHRIEK | 193 | IS |
| 074 | | \rightarrow | DELIVERING CARRIER | 274 | IS |
| 276 | CUST EQUIP STATION ASSGN | \rightarrow | CUST EQUIP INSTANCE | 259 | IS CURRENTLY ASSIGNED TO |
| 277 | OWNED EQUIP STATION ASSGN | \diamond | STATION EQUIP LOC | 240 | IS |
| | | \rightarrow | OWNED EQUIP INSTANCE | 260 | IS CURRENTLY ASSIGNED TO |
| 278 | CUST EQUIP TYPE | ◇ — | CUSTOMER | 1 | PROVIDES |
| | | \Diamond | EQUIPMENT | 51 | IS |
| | - | \rightarrow | CUST EQUIP INSTANCE | 259 | IS SEEN AS |
| 279 | CHAIRD FOLIAR THE | \rightarrow | RQMT/CUST EQUIP TYPE | 280 | HAS" |
| 219 | OWNED EQUIP TYPE | \rightarrow | EQUIPMENT | 51 | IS |
| | | \rightarrow | OWNED EQUIP INSTANCE | 260 | IS SEEN AS |
| 280 | RQMT FOR CUST EQUIP TYPE | | RQMT/OWNED EQUIP TYPE | 282 | SATISFIES |
| 200 | MAN TON COST EWOIP TYPE | \rightarrow | EQUIP CALLOUT | 98 | RESULTS FROM |
| 282 | RQMT FOR OWNED EQUIP TYPE | \sim | CUST EQUIP TYPE | 278 | HAS |
| | MAN I ON OMNED EGOTE TAPE | | EQUIP CALLOUT | 98 | RESULTS FROM |
| 284 | CUST TOOL TYPE | \sim | OWNED EQUIP TYPE | 279 | SATISFIES |
| | 333. 1002 1112 | | CUSTOMER | 1 | PROVIDES |
| - 1 | | · | TOOL TYPE | 45 | IS |
| | 100 | ^ | CUST TOOL | 243 | IS SEEN AS |
| | 1 | | RQMT/CUST TOOL TYPE | 286 | HAS |
| | | | | | |
| E. | TITLE: | D EM=- | TY CLASS NODE (.90SS R | | NUMBER: |

8 September 1983

| NO. | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS LABEL | | RELATION CLASS LABEL |
|------|-------------------------|---------------|-----------------------------|--------|----------------------|
| 296 | ENGRN BOM SPEC CALLOUT | 0- | ENGRN SPEC | NO. | IS USED AS |
| | | \rightarrow | ENGRN BOM ITEM | 68 | SPECIFIES |
| 297 | SERIALIZED PART END USE | \rightarrow | END ITEM | 5 | IS |
| | | \rightarrow | SERIALIZED PART INSTANCE | 147 | HAS |
| 298 | ORIG SUPPLIER QUOT RQST | ◇ — | SUPPLIER QUOTE REQUEST | 90 | IS |
| 12.2 | | \rightarrow | SUPPLIER QUOTE | 91 | HAS |
| 299 | COMPONENT PART | ◇ — | PART | 6 | HAS |
| | | \diamond — | PART | 6 | IS |
| | 4242 | \rightarrow | PLANNED MFG OPER | 386 | IS SUPPORTED BY |
| 300 | IMAGE PART | <u>→</u> | PART | 6 | HAS |
| 701 | | \rightarrow | PART | 6 | IS |
| 301 | ALTERNATE PART | \Diamond | PART | 6 | HAS |
| 302 | DEEEDEART COCO | \Diamond | PART | 6 | IS |
| 502 | REFERENCE SPEC | \Diamond | ENGINEERING SPEC | 13 | HAS |
| 303 | TOOL DWG CALLOUT | <u></u> | ENGINEERING SPEC | 13 | IS |
| | TOOL DING CALLOUT | $\langle - $ | TOOL DRAWING | 42 | SATISFIES |
| 304 | SALES ORDER ITEM/ | | OPER TOOL CALLOUT | 47 | REQUIRES |
| | CONTRACT ITEM | () | CONTRACT ITEM | 114 | IS REFERENCED BY |
| | | < <u></u> | SALES ORDER ITEM | 132 | REFERENCES |
| 308 | WBS | \rightarrow | PROGRAM | 347 | HAS |
| | 11. | \rightarrow | SALES ORDER | 2 | IS ASSIGNED TO |
| DDE: | TITLE: | | | | |
| YT | | ED ENTI | TY CLASS NODE CROSS RE | EEDENG | NUMBER: |

| | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | | RELATION CLASS LABEL |
|------|-----------------------------------|-------------------|-------------------------|-------|-----------------------|
| NO. | LABEL | | LABEL | NO. | |
| 308 | WBS (Continued) | | PROD ORDER | 57 | IS CHARGED FOR |
| | | \rightarrow | WBS ITEM | 312 | HAS |
| 14 | | \leftarrow | WBS ITEM | 312 | IS |
| | | \rightarrow | WBS USE FOR PURCH REQ I | M 311 | HAS |
| | | \rightarrow | WBS USE FOR PURCH ORD I | M 317 | HAS |
| 309 | SUPPLIER DELIVERY LOT | \rightarrow | SUP PART LOT STOCK LOC | 325 | HAS |
| | | ├ | PART | 6 | IS RECEIVED AS |
| 311 | WBS USE FOR PURCH REQ ITEM | ← | WBS | 308 | HAS |
| | | ◇ — | PURCH REQ ITEM | 23 | IS ASSIGNED |
| 312 | WBS ITEM | ◇ — | WBS | 308 | HAS |
| | | \rightarrow | WBS | 308 | IS |
| | | → | COST ACCOUNT | 4 | HAS COST COLLECTED BY |
| | | - | WBS ITEM TOOL RQMT | 344 | HAS |
| | | \rightarrow | MILESTONE | 353 | IS COMPRISED OF |
| 1 | | $-\dot{\diamond}$ | ORGANIZATION | 355 | IS COMPRISED OF |
| 6-1 | | —ŏ | END ITEM WORK ELEMENT | 389 | IS COMPRISED OF |
| 313 | PURCH ITEM UNIT OF MEASURE | ◇ — | PURCH REQ ITEM | 23 | HAS |
| 314 | PURCH REQ ITEM DEL RQMT | ◇ — | PURCH REQ ITEM | 23 | HAS |
| 315 | PURCH ORD ITEM DEL ROMT | ◇ — | PURCH ORD ITEM | 27 | HAS |
| 316 | PURCH ORD ITEM UNIT OF MEASURE | \$ — | PURCH ORD ITEM | 27 | HAS |
| DDE: | TITLE: | | TITY CLASS NODE CROSS F | | NUMBER: |

8 September

8 September

| | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | | RELATION CLASS LABEL |
|------|-------------------------|---------------|------------------------|-----|---------------------------|
| NO. | LABEL | | LABEL | NO. | RELATION CEASS EABEL |
| 336 | MFG PROJECT PLAN | \rightarrow | SALES CONTRACT | 81 | IS BASIS FOR |
| | | \rightarrow | RESOURCE PLAN | 79 | CONTAINS |
| | loron-necesia | \rightarrow | TEST RQMT | 362 | SPECIFIES |
| 338 | SCHED CHG REQST | \Diamond | PROGRAM | 347 | RESCHEDULE IS PROPOSED BY |
| | | \leftarrow | SCHED CHG AUTH | 365 | BECOMES |
| 340 | PART TOOL ROMT | ◇ — | PART | 6 | HAS |
| | | ◇ — | CUST TOOL | 243 | SUPPORTS |
| | | \rightarrow | END ITEM RQMT FOR TOOL | 341 | ESTABLISHES |
| 341 | END ITEM RQMT FOR TOOL | ◇ — | END ITEM | 5 | HAS |
| | | \Diamond | PART TOOL RQMT | 340 | ESTABLISHES |
| 342 | ORGANIZATION EQUIP RQMT | ◇ — | EQUIPMENT | 51 | SATISFIES |
| | | ◇ — | ORGANIZATION | 422 | HAS |
| 344 | WBS ITEM TOOL ROMT | ◇ — | WBS ITEM | 312 | HAS |
| 1 | | ├ | CUST TOOL | 243 | SUPPORTS |
| 345 | DWG APPLIC TO CONTRACT | ◇ — | RELEASED ENGRN DWG | 12 | HAS |
| | | ◇ — | SALES CONTRACT | 81 | HAS |
| 346 | ACTIVITY POLICY | \Diamond — | STATEMENT OF WORK | 331 | RESULTS IN |
| | | \rightarrow | RESOURCE PLAN | 79 | CONSTRAINS |
| | | - → | SECTION ACTIVITY | 335 | IDENTIFIES |
| | | \rightarrow | REL ENGRN DWG | 12 | IS USED BY |
| | | | | | |
| DDE: | TITLE: | | ITY CLASS NODE CROSS F | | NUMBER: |

| SUBJEC | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLASS | | DELATION OLAGO LAGO |
|--------|-----------------------|-----------------------|-------------------------|---------|----------------------|
| NO. | LABEL | w.c. | LABEL | NO. | RELATION CLASS LABEL |
| 362 | TEST REQUIREMENT | ◇ — | MFG PROJECT PLAN | 336 | SPECIFIES |
| 363 | SECTION | \rightarrow | PART | 6 | IS |
| | | \rightarrow | SECTION ACTIVITY | 335 | PROVIDES SCOPE FOR |
| 364 | METHOD USE | ◇ — | ROUTING ITEM | 131 | IS EMPLOYED IN |
| | | ◇ — | SECTION ACTIVITY | 335 | REQUIRES |
| 365 | SCHED CHG AUTH | \rightarrow | SCHED CHG REQUEST | 338 | BECOMES |
| | | | RESCHED MILESTONE | 384 | RESCHEDULES |
| 366 | TYPE-VER SHIP CALLOUT | \Diamond | TYPE-VERSION SHIP | 349 | IS REFERENCED BY |
| | | \Diamond | WORK PACKAGE | 380 | SPECIFIES |
| 367 | CONFIGURATED ITEM | ◇ | PART | 6 | IS |
| 368 | MATERIAL | $ \rightarrow $ | MATERIAL NEED | 382 | SATISFIES |
| | | \rightarrow | DWG MATL CALLOUT | 385 | IS CALLED OUT BY |
| | | $ \longrightarrow $ | PLANNED MFG OPR MATL RQ | 1T 386 | SATISFIES |
| | | $ \longrightarrow $ | PART ROMT FOR MATL | 397 | SATISFIES |
| 200 | | | PROD ORDER MATL CALLOUT | 411 | IS REQUIRED BY |
| 370 | MATERIAL PLAN | \rightarrow | RESOURCE PLAN | 79 | IS |
| 371 | MANPOWER PLAN | \rightarrow | RESOURCE PLAN | 79 | IS |
| 372 | TOOLING PLAN | \rightarrow | resource plan | 79 | IS |
| 373 | FACILITIES PLAN | \rightarrow | RESOURCE PLAN | 79 | IS |
| 374 | Q.C. PLAN | \rightarrow | resource plan | 79 | IS |
| 375 | EQUIP PLAN | \rightarrow | RESOURCE PLAN | 79 | IS |
| IODE: | TITLE: | | | | humoso |
| | | TED ENT | ITY CLASS NODE CROSS R | EFERENC | NUMBER: |

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS | | RELATION CLASS LABEL |
|------|----------------------------|---------------------------|---------------------------------|------------|-----------------------|
| 377 | PLANNING PARTS LIST ITEM | X | LABEL WORK PACKAGE | NO. | |
| | | \sim | PLANNING PARTS LIST | 380 | CONTAINS |
| 378 | CUTTING SPEC | ~ | CUTTING SPEC CALLOUT | 396 392 | CONTAINS |
| 379 | VISUAL AID | $-\tilde{\delta}$ | VISUAL AID CALLOUT | 395 | IS SPECIFIED BY |
| 380 | WORK PACKAGE | ~ | PART | | IS SPECIFIED BY |
| | | ~ | PROCESS PLAN | 6 | HAS |
| | | \sim | PLAN PARTS LIST ITEM | 415 | IS BASIS FOR |
| | | \sim | TYPE-VER SHIP CALLOUT | 377 | CONTAINS |
| 381 | APPVD CONFIG BASLN | | | 366 | SPECIFIES |
| | THE CONTROL BASEN | | CONFIG BASLN | 352 | BECOMES |
| | | | END ITEM | 5 | DESCRIBES |
| 382 | MATERIAL NEED | | DWG APPLIC TO BASLN MATERIAL | 404 | HAS |
| | THE TELE | \rightarrow | RESOURCE NEED | 368 | SATISFIES |
| 383 | END ITEM METHOD OCCUR | _ | END ITEM | 399 | IS |
| | and a real vietness occur. | | PLANNED MFG OPER | 5 | IS MANUFACTURED USING |
| 384 | RESCHED MILESTONE | $\stackrel{\vee}{\wedge}$ | | 421 | IS USED FOR |
| | NESSNED FILESTONE | | MILESTONE | 353 | IS |
| 385 | DRAWING MATL CALLOUT | | SCHED CHG AUTH | 365 | RESCHEDULES |
| ,,,, | DIVANTING MATE CALEUOT | <u>\</u> | MATERIAL SUSSILIANS | 368 | IS CALLED OUT BY |
| 386 | PLAN MFG OPER MATL ROMT | <u>\</u> | RELEASED ENGRN DWG | 12 | CALLS OUT |
| 700 | TEAN MIG OFER MAIL RUM! | \Diamond | MATERIAL | 368 | SATISFIES |
| | | <u></u> | COMPONENT PART | 299 | IS SUPPORTED BY |
| | | \Diamond | PLANNED MFG OPER | 421 | CALLS OUT |
| DE: | TITLE: | | | | NUMBER: |
| | RELA | TED ENTI | TY CLASS NODE CROSS R | EFERENC | CE INOMBEN. |

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|------|---------------------------------|---------------|-----------------------------|-----|-----------------------|
| 387 | END ITEM ROMT FOR PART | ◇ — | PART | 6 | SATISFIES |
| | | ◇ — | END ITEM | 5 | HAS |
| 388 | FAB LOT SUB ACCOUNT | ◇ — | COST ACCOUNT | 4 | IS COMPRISED OF |
| | | ◇ — | PART LOT | 93 | HAS COST COLLECTED BY |
| 389 | END ITEM WORK ELEMENT | \Diamond | WBS ITEM | 312 | IS COMPRISED OF |
| 771 | | ◇ | END ITEM | 5 | IS COMPRISED OF |
| 390 | END ITEM ROMT FOR DWG | ◇ — | REL ENGRN DWG | 12 | SATISFIES |
| | | ◇ — | END ITEM | 5 | HAS |
| 391 | ENGRN ORDER APPL TO END ITEM | ◇ — | APPVD ENGRN ORDER | 361 | IDENTIFIES |
| | | ◇ — | END ITEM | 5 | IS AFFECTED BY |
| 392 | CUTTING SPEC CALLOUT | ◇ — | ROUTING ITEM | 131 | REFERENCES |
| What | | ◇ | CUTTING SPEC | 378 | IS SPECIFIED BY |
| 393 | CHG RQST DWG CALLOUT | ◇ — | ENGRN CHG REQUEST | 354 | CHANGES |
| | | ◇ — | RELEASED ENGRN DWG | 12 | IS IMPACTED BY |
| 395 | VISUAL AID CALLOUT | ◇ — | ROUTING ITEM | 131 | REFERENCES |
| | | ◇ — | VISUAL AID | 379 | IS SPECIFIED BY |
| 396 | PLANNING PARTS LIST | ◇ — | RELEASED ENGRN DWG | 12 | IS REFERENCED BY |
| | | → | PLAN. PARTS LIST ITEM | 377 | CONTAINS |
| 397 | PARTS ROMT FOR MATL | ◇ — | MATERIAL | 368 | SATISFIES |
| | | > ─ | PART | 6 | HAS |
| DE: | ITITLE: | | | | NUMBER: |

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS LABEL | NO. | RELATION CLASS LABEL |
|-------|----------------------------|---------------|-----------------------------|---------|--------------------------------|
| 398 | DELIVERY SCHED ITEM | ◇ — | MILESTONE | 353 | CONTAINS |
| | | -0 | END ITEM | 5 | PROVIDES DELIVERY SCHEDULE FOR |
| 399 | RESOURCE NEED | ◇ | END ITEM | 5 | HAS |
| | | ◇ — | MILESTONE | 353 | PROVIDES DATES FOR |
| | | \leftarrow | MATERIAL NEED | 382 | IS |
| | | \leftarrow | MANPOWER NEED | 400 | IS |
| | | \leftarrow | TOOLING NEED | 401 | IS |
| N | | \leftarrow | FACILITIES NEED | 402 | IS |
| | | \leftarrow | Q.A. NEED | 322 | IS |
| | | \leftarrow | EQUIP NEFD | 403 | IS |
| m1) | Auguston 1 | \leftarrow | RESOURCE PLAN | 79 | IDENTIFIES REQUIREMENT FOR |
| 400 | MANPOWER NEED | \rightarrow | RESOURCE NEED | 399 | IS |
| 401 | TOOLING NEED | \rightarrow | RESOURCE NEED | 399 | IS |
| 402 | FACILITIES NEED | \rightarrow | RESOURCE NEED | 399 | IS |
| 403 | EQUIPMENT NEED | \rightarrow | resource need | 399 | IS |
| 404 | DWG APPLIC TO BASLN | ◇ — | APPVD CONFIG BASLN | 381 | HAS |
| | | ◇ | RELEASED ENGRN DWG | 12 | HAS |
| 405 | PART SHORTAGE | > | PART LOT | 93 | HAS |
| | | ◇ — | PRODUCTION ORDER | 57 | GENERATES |
| . = 3 | | \leftarrow | PART SHORTAGE RECONCIL | 412 | IS RELIEVED BY |
| 406 | STOP ORDER | → > | STOP ORDER APPLICATION | 408 | NAMES |
| DE: | TITLE: | | | | Numa- |
| | | TED ENT | ITY CLASS NODE CROSS R | EFERENC | NUMBER: |

8 September 1983

| NO. | T ENTITY CLASS LABEL LABEL | R.C. | RELATED ENTITY CLASS | | |
|-----|-----------------------------------|-------------------|-------------------------|--------|----------------------|
| 415 | PROCESS PLAN (Cont.) | - | LABEL | NO. | RELATION CLASS LABEL |
| 417 | TROCESS FLAN (CONT.) | 1 | STD RTG CALLOUT | 220 | SPECIFIES |
| | | + | PROC PLAN PART DWG CALL | 224 | SPECIFIES |
| | | | COMPONENT PART CALLOUT | 230 | HAS |
| 416 | 2017 | \rightarrow | PROC PLAN USE AS PROD O | RD 420 | IS USED FUR |
| 416 | ROUTING HEADER | \rightarrow | STANDARD ROUTING | 58 | HAS |
| 41/ | RTG ITEM/STD RTG | ◇ — | STANDARD ROUTING | 58 | HAS |
| 430 | | \Diamond | ROUTING ITEM | 131 | HAS |
| 418 | PROCESS PLANNER | \rightarrow | EMPLOYEE | 116 | PERFORMS AS |
| | | $ \rightarrow $ | PROCESS PLAN | 415 | DEVELOPS |
| 420 | PROCESS PLAN USE AS PROD ORDER | ← | PROCESS PLAN | 415 | IS USED FOR |
| | | ◇ — | PROD ORDER | 57 | HAS |
| 421 | PLANNED MFG OPER | | PROCESS PLAN | 415 | CALLS OUT |
| 1 | | $ \rightarrow $ | PLAN MFG OPER MATL ROMT | 386 | CALLS OUT |
| | | > | AUTH OPER | 334 | IS USED FOR |
| | | $ \rightarrow $ | END ITEM METH OCCUR | 383 | IS USED FOR |
| | | → | OPER TOOL CALLOUT | 47 | HAS |
| | | \rightarrow | EQUIP CALLOUT | 98 | HAS |
| | | \leftarrow | oper Std | 63 | HAS |
| | | ◇ | STATION | 100 | PERFORMS |
| 422 | ORGANIZATION | \rightarrow | COST ACCOUNT | 4 | HAS |
| | | \rightarrow | STATION | 100 | IS COMPRISED OF |
| E: | TITLE: | | | | |
| | | TED ENTI | TY CLASS NODE CROSS RI | | NUMBER: |

| SUBJEC | T ENTITY CLASS LABEL | R.C. | RELATED ENTITY CLAS | S | RELATION CLASS LABEL |
|--------|----------------------|-------------------------|---------------------|-----|-----------------------------|
| NO. | LABEL | ж.с. | LABEL | NO. | TC COMPOSICED OF |
| 422 | ORGANIZATION (Cont.) | → | EMPLOYEE | 116 | IS COMPRISED OF |
| | | | DEPT EQUIP RQMT | 342 | HAS |
| | | $ \rightarrow \rangle$ | ENGRN CHG REQUEST | 354 | ISSUES |
| | | \rightarrow | ORGANIZATION TASK | 355 | IS RESPONSIBLE FOR |
| | | \rightarrow | FACILITY SPEC | 413 | CONFORMS TO |
| | | \leftarrow | COMP ORGANIZATION | 423 | IS |
| - 4 | | | COMP ORGANIZATION | 423 | HAS |
| 423 | COMP ORGANIZATION | \rightarrow | ORGANIZATION | 422 | IS |
| | | ◇ | ORGANIZATION | 422 | HAS |
| | | | | | |
| | | | | | |
| NODE: | TITLE: | | | | NUMBER: |

Section 2.4

5501/6201 ATTRIBUTE CLASS NAME CROSS REFERENCE USE

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: | |
|----------|-----------------------------|-------|-------------|--------|------|----------|--|
| | PROJECT: | REV: | DRAFT | | | | |
| | | | RECOMMENDE | D | | | |
| | NOTES: 1 2 3 4 5 6 7 8 9 10 | | PUBLICATION | | | | |

THE FOLLOWING ATTRIBUTE CLASS NAME CROSS REFERENCE IDENTIFIES THE SOURCE MODEL OR MODELS FROM WHICH EACH COMPOSITE VIEW ATTRIBUTE CLASS WAS DERIVED. IT IS SEQUENCED ALPHABETICALLY BY COMPOSITE VIEW ATTRIBUTE CLASS NAME AND LISTS THE MFG1 ATTRIBUTE CLASS NAME AND/OR THE 5501/6201 ICV ATTRIBUTE CLASS NAME. THE UNDERLINED ATTRIBUTE CLASS NAMES ARE KEY ATTRIBUTE CLASSES.

2-10

8 September 1983

NODE: TITLE: NUMBER: 75

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|--|--|---|--|
| Academic Qualification Acknowledgement Code (P.O.) Acknowledgement Reminder Date (P.O.) Activity Information Activity Name Activity No. Actual Labor Costs to Date Actual Labor Hours to Date Actual Machine Hours to Date Actual Material Cost to Date Actual Start Date Actual Completion Date | Academic Qualification Acknowledgement Code (P.O.) Acknowledgement Reminder Date (P.O.) Activity Information Activity Name Activity No. Actual Labor Costs to Date Actual Labor Hours to Date Actual Machine Hours to Date Actual Material Cost to Date Actual Start Date Actual Completion Date | Activity Information Activity Name Activity Policy No. | |
| Allocation Impact Annual Commitment Forecast Assembly Class Name Bill of Material Item No. Buyer Estimate Buyer Name Buyer No. Carrier Name Carrier No. Change No. (SOW) | Allocation Impact Annual Commitment Forecast Assembly Class Name Bill of Material Item No. Buyer Estimate Buyer Name Buyer No. Carrier Name Carrier No. Change No. (SOW) | Allocation Impact Annual Commitment Forecast Assembly Class Name Bill of Material Item No. Buyer Estimate Change No. | |
| pince. | TE CLASS CROSS-REFERENCE | NUMBER: | |

| FG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | | |
|---|--------------------------------------|---|--|--|
| Change Description (SOW) | Change Description (SOW) | Change Description | | |
| Classification Code | Classification Code | Class Code | | |
| Class Type | Class Type | Class Type | | |
| Configurated Item Affected | Configurated Item Affected | Configurated Item Affected | | |
| Configuration Item Serial No. | Configurated Item Serial No. | Configurated Item Serial No. | | |
| Configuration Baseline Approval Date | Configuration Baseline Approval Date | Configuration Baseline Approval Date | | |
| Configuration Baseline No. | Configuration Baseline No. | Configuration Baseline No. | | |
| Configuration Review Board Document No. | Config. Review Board Document No. | Config. Review Board Document No. | | |
| Conformance Certification No. | Conformance Certification No. | 1995/12/2005 | | |
| Contract Approval Date | Contract Approval Date | Contract Approval Date | | |
| Contract Date | Contract Date | Contract Date | | |
| Contract Delivery Rate | Contract Delivery Rate | Contract Delivery Rate | | |
| Contract Item No. | Contract Item No. | Paragraph No. | | |
| Contract Name | Contract Name | Contract Name | | |
| Contract Item No. | Contract Item No. | Contract Item No. | | |
| Contract No. | Contract No. | Contract No. | | |
| Contract Project No. | Contract Project No. | | | |
| Contract Requirement Effective Date | Contract Requirement Effective Date | Contract Requirement Effective Date | | |
| Contract Revision No. | Contract Revision No. | | | |
| Customer Tool No. | Customer Tool No. | Contract Tool No. | | |
| Contract Type | Contract Type | Contract Type | | |
| Cost Account Name | Cost Account Name | Account Name Sub-Division of Work Name | | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV |
|-------------------------------|----------------------------|---|
| Cost Account No. | Cost Account No. | Sub-Division of Work No. |
| Cost Estimate | Cost Estimate | Cost Estimate |
| Cost Source | Cost Source | |
| Cost Summary | Cost Summary | Cost Source |
| Customer No. | Customer No. | Cost Summary |
| Customer Tool Crew-Size | Customer Tool Crew-Size | 01 |
| Customer Tool Description | Customer Tool Description | Customer Owned Tool Crew-Size |
| Customer Tool Order No. | Customer Tool Order No. | Customer Owned Tool Description |
| Customer Tool Quantity | Customer Tool Quantity | Customer Owned Tool Order No. |
| Cutting Spec. ID | Cutting Spec. ID | Customer Owned Tool Quantity Cutting Spec. ID No. |
| Date Required | Date Required | catting spec. In No. |
| Date Closed | Date Closed | |
| Delivery Schedule Item No. | Delivery Schedule Item No. | Delivery Schedule Item No. |
| Deviation Waiver No. | Deviation Waiver No. | belivery schedule Item No. |
| Drawing Approval Date | Drawing Approval Date | Drawing Approval Date |
| rawing Bill of Material | Drawing Bill of Material | Drawing Bill of Material |
| rawing Name | Drawing Name | Drawing Name |
| rawing Next Assembly | Drawing Next Assembly | Drawing Next Assembly |
| rawing No. | Drawing No. | Drawing No. |
| rawing Revision Letter | Drawing Revision Letter | Drawing Revision Letter |
| arliest Start Date | Earliest Start Date | 3 |
| mployee Name | Employee Name | Employee Name |
| J. T. C. | TE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV |
|--|--|-------------------------------------|
| Employee No. | Employee No. | Employee No. |
| Employee Sex | Employee Sex | |
| Employee Skill Class | Employee Skill Class | Employee Skill Class |
| End Item Description | End Item Description | End Item Description |
| End Item Major Assembly Scheduled In-Work Date | End Item Major Assembly Scheduled In-Work Date | End Item Scheduled In-Work Date |
| End Item Major Assembly Scheduled Delivery Date | End Item Major Assembly Scheduled Delivery Date | End Item Scheduled Delivery Date |
| End Item Serial No. | End Item Serial No. | End Item Serial No. |
| Eng. Change Item No. | Eng. Change Item No. | |
| Eng. Change Proposal No. | Eng. Change Proposal No. | Eng. Change Proposal No. |
| Eng. Change No. | Eng. Change No. | Change No. |
| Eng. Change Request Approval | Eng. Change Request Approval | Eng. Change Request Approval |
| Eng. Change Request Date | Eng. Change Request Date | Eng. Change Request Date |
| Eng. Change Request Description | Eng. Change Request Description | Eng. Change Request Description |
| Eng. Change Request No. | Eng. Change Request No. | Eng. Change Request No. |
| Eng. Change Request Originator | Eng. Change Request Originator | Eng. Change Request Originator |
| Eng. Order Approval Date | Eng. Order Approval Date | Eng. Order Approval Date |
| Eng. Order No. | Eng. Order No. | Eng. Order No. |
| Eng. Specification No. | Eng. Specification No. | Process Std. No. |
| Equipment Availability Standard | Equipment Availability Standard | |
| Equipment Description | Equipment Description | Equipment Description |

| Equipment Property No. Est. Cost (P.O.) Est. Tool Life Est. Unit Price (PRI) Estimator Expedite Date (P.O.) Expected Acknowledgement Date External Priority Fabrication Hours Flow Span of Assembly Formal Planning Quantity Formal Planning Quantity | Equipment Downtime Standard Equipment Property No. Est. Cost (P.O.) Est. Tool Life Est. Unit Price (PRI) Estimator Expedite Date (P.O.) Expected Acknowledgement Date External Priority External Priority External Priority External Planning Hours | Estimator Fabrication Hours Flow Span of Assembly |
|--|---|--|
| Generation Date Go Ahead By Go Index No. Inspection Code (Tool) Inspection Evaluation ID Inspector No. Inspector No. Inspector No. Inspector No. Inspector No. Inspector No. | ormal Planning Quantity uselage Sequence No. eneration Date o Ahead By ndex No. nspection Code (Tool) nspection Evaluation ID nspector No. nstallation Responsibility | Formal Planning Hours Quantity of Formal Planning Fuselage Sequence No. Generation Date Go Ahead By Index No. Installation Responsibility |
| | struction | Instruction |

FTR110410000U

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV |
|--|--|---|
| Issue No. | Issue No. | Issue No. |
| Item Description | Item Description | Item Description |
| Latest Start Date | Latest Start Date | Start Date |
| Last Change Date of Purchase Requisition | Last Change Date of Purchase Requisition | |
| Leadtime | Leadtime | Leadtime |
| Length of Quotation | Length of Quotation | Length of Quotation |
| Length of Quotation Validity | Length of Quotation Validity | Length of Quotation Validity |
| Library Code | Library Code | Library Code |
| Line Item Description | Line Item Description | Line Item Description |
| Line No. | Line No. | Line No. |
| Line Position | Line Position | Line Position |
| Low Level Code | Low Level Code | Low Level Code |
| Machine Dimensions (Eq.) | Machine Dimensions (Eq.) | |
| Machine Hour Rate | Machine Hour Rate | |
| Machine Instruction No. | Machine Instruction No. | |
| Machine Weight | Machine Weight | |
| Major Assembly Break | Major Assembly Break | Major Assembly Break |
| Major Non-Conformance No. | Major Non-Conformance No. | |
| Make/Buy Code | Make/Buy Code | Make/Buy Code |
| Management Program Review Board Directive No. | Management Program Review Board Directive No. | Management Program Review Board Directive No. |
| NODE: TITLE: | JTE CLASS CROSS-REFERENCE | NUMBER: |

| | Manufacturing Day Manufacture Request No. Manufacturing Planner No. Manufacturing Process Name Manufacturing Process No. Manufacturing Request No. Master Change Record No. Material Allocation Material Average Price Raw Material Code/Part No. | Manufacturing Day Master Change Record No. Material Allocation Average Price Part No./Raw Material Code |
|--|--|---|
| Manufacturing Request No. Master Change Record No. Material Allocation | Manufacturing Process No. Manufacturing Request No. Master Change Record No. Material Allocation Material Average Price Raw Material Code/Part No. | Material Allocation Average Price |
| Material Average Price Raw Material Code/Part No. | Material Average Price Raw Material Code/Part No. | Average Price |
| Material Commodity Group | | Part No./Raw Material Code |
| Material Description Material Library Code | Material Commodity Group Material Description | Commodity Group Material Description |
| Material Issue No. Material Quantity | Material Library Code Material Issue No. Material Quantity | Material Library Code Material Quantity |
| Material Receipt No. Material Specification Milestone Completion Date | Material Receipt No. Material Specification Milestone Completion Date | Material Specification |
| Milestone Description Milestone In–Work Date Minor Non–Conformance No. | Milestone Description Milestone In-Work Date | Milestone Completion Date Milestone Description Milestone In-Work Date |
| fodel TITLE: | Minor Non-Conformance No. Model TE CLASS CROSS-REFERENCE | Model NUMBER: |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|-------------------------------|-------------------------------|---------------------------------|--|
| Need Date | Need Date | Need Date | |
| Non-Conforming Item No. | Non-Conforming Item No. | | |
| Normal Start Time | Normal Start Time | | |
| Normal Stop Time | Normal Stop Time | | |
| Numerical Control Program No. | Numerical Control Program No. | Page 10 and 1 | |
| Number of Ships | Number of Ships | Number of Ships | |
| Operator No. | Operator No. | * | |
| Order Discount Terms (P.O.) | Order Discount Terms (P.O.) | (AF | |
| Organization ID | Organization ID | *· · · · | |
| Other Changes (P.O.) | Other Changes (P.O.) | | |
| Page No. | Page No. | Page No. | |
| Part Cost | Part Cost | Part Cost | |
| Part Description | Part Description | Part Description | |
| Part Lot Completion Date | Part Lot Completion Date | Fabrication Lot Completion Date | |
| Part Lot In-Work Date | Part Lot In-Work Date | Fabrication Lot In-Work Date | |
| Part Lot No. | Part Lot No. | Fabrication Lot No. | |
| Part Lot Size | Part Lot Size | Fabrication Lot Size | |
| Part Name | Part Name | Part Name | |
| Part No. | Part No. | Part No. | |
| Part Status Code | Part Status Code | Part Status Code | |
| Part Unit of Measure | Part Unit of Measure | Unit of Measure | |
| DE: TITLE: | TE CLASS CROSS-REFERENCE | NUMBER: | |

| FG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | | |
|---|---|--|--|--|
| Planned Manufacturing Operation Description | Planned Manufacturing Operation Description | Planned Manufacturing Operation Description | | |
| Planned Manufacturing Operation Run Time | Planned Manufacturing Operation Run Time | Planned Manufacturing Operation Run Time | | |
| Planned Manufacturing Operation Sequence No. | Planned Manufacturing Operation Sequence No. | Planned Manufacturing Operation Sequence No. | | |
| Planned Manufacturing Operation Set—Up Time | Planned Manufacturing Operation Set-Up Time | Planned Manufacturing Operation Set-Up Time | | |
| Planned Order Release Date | Planned Order Release Date | | | |
| Planning Parts List Item No. | Planning Parts List Item No. | Planning Parts List Item No. | | |
| Planned Queue Time (Eq.) | Planned Queue Time (Eq.) | 3 | | |
| Planning Type | Planning Type | Planning Type | | |
| Prepared By | Prepared By | Prepared By | | |
| Position Value | Position Value | Position Value | | |
| Pricing Estimate | Pricing Estimate | Pricing Estimate | | |
| Process Lead Time | Process Lead Time | Process Lead Time | | |
| Process Plan Reason Code | Process Plan Reason Code | Process Plan Reason Code | | |
| Process Plan No. | Process Plan No. | Process Plan No. | | |
| Processing Allocation | Processing Allocation | Processing Allocation | | |
| Process Planner No. | Process Planner No. | Process Planner No. | | |
| Production Control Board No. | Production Control Board No. | Production Control Board No. | | |
| Production Order Description | Production Order Description | Deard No. | | |
| Production Order No. | Production Order No. | Serial No. | | |
| Production Order Priority (Prod. 0.) | Production Order Priority (Prod. 0.) | | | |
| TITLE: | TE CLASS CROSS-REFERENCE | NUMBER: | | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|---------------------------------------|--|-----------------|--|
| Production Order Quantity (Prod. 0.) | Production Order Quantity (Prod. 0.) | | |
| Production Order Schedule Date | Production Order Schedule Date Production Type | Production Type | |
| Production Type | Program Name | Program Name | |
| Program Name | | Subject | |
| Project Name | Project Name | Asset No. | |
| Property No. | Property No. | ASSEL NO. | |
| Purchase Order Activity Code | Purchase Order Activity Code | | |
| Purchase Order Change No. | Purchase Order Change No. | | |
| Purchase Order Date | Purchase Order Date | | |
| Purchase Order Delivery Req'mt. No. | Purchase Order Delivery Req'mt. No. | | |
| Purchase Order Item No. | Purchase Order Item No. | | |
| Purchase Order Last Change Date | Purchase Order Last Change Date | | |
| Purchase Order No. | Purchase Order No. | 10 | |
| Purchase Order Revision Level | Purchase Order Revision Level | | |
| Purchase Order Type | Purchase Order Type | | |
| Purchase Order Unit of Measure (POI) | Purchase Order Unit of Measure | | |
| Purchase Request Change No. | Purchase Request Change No. | 1 | |
| Purchase Request Unit of Measure | Purchase Request Unit of Measure | | |
| Purchase Requisition Item No. | Purchase Requisition Item No. | 4 1 | |
| Purchase Requisition No. | Purchase Requisition No. | | |
| Purchase Request Revision Level | Purchase Request Revision Level | | |
| Purchase Request Delivery Req¹mt. No. | Purchase Request Delivery Req'mt. No | | |
| DE: TITLE: | TE CLASS CROSS-REFERENCE | NUMBER: | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV |
|------------------------------------|------------------------------------|------------------------------------|
| QA Unit ID | QA Unit ID | QA Unit ID |
| Quantity Ordered (POI) | Quantity Ordered (POI) | 3 |
| Quantity of Formal Planning | Quantity of Formal Planning | Quantity of Formal Planning |
| Quantity of Positions | Quantity of Positions | Quantity of Positions |
| Quantity Required (PRI) | Quantity Required (PRI) | |
| Rate Per Week | Rate Per Week | Rate Per Week |
| Receiving Report Item No. | Receiving Report Item No. | |
| Receiving Report No. | Receiving Report No. | |
| Requisition Date | Requisition Date | |
| Requested Carrier Name | Requested Carrier Name | |
| Requested Supplier Name | Requested Supplier Name | |
| Requested Supplier No. | Requested Supplier No. | |
| Response No. | Response No. | Response No. |
| Resource Category | Resource Category | Resource Category |
| Return Order No. | Return Order No. | 1 |
| Revision No. | Revision No. | Revision No. |
| Rework Order No. | Rework Order No. | |
| Routing Item No. | Routing Item No. | |
| Sales Order Item No. | Sales Order Item No. | |
| Sales Order Name | Sales Order Name | General Order Name |
| Sales Order ID | Sales Order ID | General Order No. |
| Scheduled Activity Completion Date | Scheduled Activity Completion Date | Scheduled Activity Completion Date |
| E: TITLE: | TE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | | |
|--|--|--|--|--|
| Schedule Change Authorization Approval Date | Schedule Change Authorization Approval Date | Schedule Change Authorization Approval Date | | |
| Scheduled Activity Start Date | Scheduled Activity Start Date | Scheduled Activity Start Date | | |
| Schedule Change Authorization Line No. | Sch. Chg. Authorization Line No. | Sch. Chg. Authorization Line No. | | |
| Schedule Change Request No. | Schedule Change Request No. | Schedule Change Request No. | | |
| Schedule Date | Schedule Date | Schedule Date | | |
| Schedule No. | Schedule No. | Schedule No. | | |
| Scheduled Delivery Date | Scheduled Delivery Date | Scheduled Delivery Date | | |
| Scheduled Due Date | Scheduled Due Date | Complete Due Date | | |
| Scheduled Release Date | Scheduled Release Date | Scheduled Release Date | | |
| Scrap Order No. | Scrap Order No. | | | |
| Section No. | Section No. | Section No. | | |
| Section Title | Section Title | Section Title | | |
| Serial No. | Serial No. | | | |
| Sheet No. | Sheet No. | Sheet No. | | |
| Shift No. | Shift No. | 1 | | |
| Ship To Location | Ship To Location | | | |
| Shortage Control No. | Shortage Control No. | Shortage Control No. | | |
| Skill Certification No. | Skill Certification No. | | | |
| Skill Classification | Skill Classification | The same of the same | | |
| Specification No. | Specification No. | Specification No. | | |
| Standard Repair No. | Standard Repair No. | | | |
| DE: ITITLE: | | NUMBER: | | |
| | E CLASS CROSS-REFERENCE | | | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|--------------------------------|--------------------------------|----------------------|--|
| Std. Labor Cost To Date | Std. Labor Cost To Date | | |
| Std. Labor Hours To Date | Std. Labor Hours To Date | | |
| Std. Machine Hours To Date | Std. Machine Hours To Date | | |
| Std. Material Cost To Date | Std. Material Cost To Date | | |
| Standard Routing No. | Standard Routing No. | | |
| Start Date | Start Date | Start Date | |
| Station Crew Size | Station Crew Size | Station Crew Size | |
| Station Function | Station Function | | |
| Station Location | Station Location | Station Location | |
| Station No. | Station No. | Station No. | |
| Station Nomenclature | Station Nomenclature | Station Nomenclature | |
| Status Code (Prod. 0.) | Status Code (Prod. 0.) | | |
| Stock Location No. | Stock Location No. | A 1 . A | |
| Stop Order No. | Stop Order No. | Stop Order No. | |
| Subject | Subject | Subject | |
| Supplement No. | Supplement No. | Supplement No. | |
| Supplier Address | Supplier Address | - 3.27.3.3.3.5.2. | |
| Supplier Audit Expiration Date | Supplier Audit Expiration Date | 1 | |
| Supplier Business Size Code | Supplier Business Size Code | | |
| Supplier Delivery Lot No. | Supplier Delivery Lot No. | | |
| Supplier EEO Code | Supplier EEO Code | 1 | |
| Supplier Invoice No. | Supplier Invoice No. | | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|--|---|---|--|
| Supplier Name | Supplier Name | | |
| Supplier No. | Supplier No. | | |
| Supplier QA Code | Supplier QA Code | | |
| Supplier Quotation No. | Supplier Quotation No. | | |
| Supplier Quotation Request No. | Supplier Quotation Request No. | | |
| Supplier Representative | Supplier Representative | | |
| Supplier Security Clearance Code | Supplier Security Clearance Code | | |
| Technical Requirement | Technical Requirement | Technical Requirement | |
| Test Code (Destruction/ Non-Destruction | Test Code (Destruction/ Non-Destruction) | Test Code (Destruction/ Non-Destruction) | |
| Test Description | Test Description | Test Description | |
| Training Certification No. | Training Certification No. | | |
| Tool Description | Tool Description | Tool Description | |
| Tool Property No. | Tool Property No. | | |
| Tool Serial No. | Tool Serial No. | | |
| Tool Weight | Tool Weight | | |
| Type Code | Type Code | Type Code | |
| Type of Change | Type of Change | Type of Change | |
| Type-Version Ship No. | Type-Version Ship No. | Type-Version Ship No. | |
| Unit Cost | Unit Cost | Unit Cost | |
| Unit Price (POI) | Unit Price (POI) | | |
| <u>Visual Aid ID</u> | <u>Visual Aid ID</u> | Visual Aid ID | |
| IODE: TITLE: | JTE CLASS CROSS-REFERENCE | NUMBER: | |

| MFG1 ICV ATTRIBUTE CLASS NAME | MFG1 | 5501/6201 ICV | |
|-------------------------------|--------------------------|-------------------------|------------------|
| WBS Item Description | WBS Item Description | WBS Item Description | |
| WBS No. | WBS No. | | |
| Work Package Serial No. | Work Package Serial No. | Work Package Serial No. | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | 8 September 1983 |
| NODE: TITLE: ATTRIBU | TE CLASS CROSS-REFERENCE | NUMBER: | = 1983 1983 |

Section 2.5

QA1 ENTITY CLASS NAME

CROSS REFERENCE USE

SADT[®]DIAGRAM FORM ST098 9/75 Form © 1975 SofTech, Inc., 460 Totten Pond Road, Walth

| USED AT: | AUTHOR: | | Tona Hoad, Waitham, Mass. 0215 | 94, USA | | |
|----------|--------------------------|-------|--------------------------------|---------|--------|----------|
| OULD AT. | PROJECT: | DATE: | WORKING | READER | DATE | CONTENT |
| | | REV: | DRAFT | | - BAIL | CONTEXT: |
| | NOTES: 1 2 3 4 5 6 7 8 9 | | RECOMMENDE | D | | |
| | 110123.1 2 3 4 5 6 7 8 9 | 10 | PUBLICATION | | | |

THE FOLLOWING ENTITY CLASS NAME CROSS REFERENCE IDENTIFIES THE SOURCE MODEL OR MODELS FROM WHICH EACH COMPOSITE VIEW ENTITY CLASS WAS DERIVED. IT IS SEQUENCED BY COMPOSITE VIEW ENTITY CLASS NUMBER AND LISTS THE COMPOSITE VIEW ENTITY CLASS NAME, MFG1 ENTITY CLASS NUMBER, MFG1 ENTITY CLASS NAME, QA1 ENTITY CLASS NUMBER AND QA1 ENTITY CLASS NAME.

NUMBER:

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|------|------------------------------|------|------------------------------|------|---------------------------|
| EC1 | CUSTOMER | El | CUSTOMER | | |
| E2 | SALES ORDER | E2 | SALES ORDER | | |
| E4 | COST ACCOUNT | E4 | COST ACCOUNT | | |
| E5 | END ITEM | E5 | END ITEM | 1131 | CONFIGURATION ITEM |
| E6 | PART | E6 | PART | 1110 | ASSEMBLY |
| E12 | RELEASED ENGINEERING DRAWING | E12 | RELEASED ENGINEERING DRAWING | 1132 | ENGINEERING DRAWING |
| E13 | ENGINEERING SPECIFICATION | E13 | ENGINEERING SPECIFICATION | 1080 | ENGINEERING SPECIFICATION |
| E14 | ENGINEERING CHANGE | E14 | ENGINEERING CHANGE | | ENDINE SIZERI TENTON |
| E19 | PURCHASED ITEM REWORK ORDER | E19 | PURCHASED ITEM REWORK ORDER | 1048 | STANDARD REPAIR CALLOUT |
| E20 | PURCHASED ITEM SCRAP ORDER | E20 | PURCHASED ITEM SCRAP ORDER | 10.0 | STANDARD NEI AIN CALLOOT |
| E22 | PURCHASE REQUEST | E22 | PURCHASE REQUEST | | |
| E23 | PURCHASE REQUEST ITEM | E23 | PURCHASE REQUEST ITEM | | |
| E24 | PURCHASE REQUEST CHANGE | E24 | PURCHASE REQUEST CHANGE | | |
| E25 | BUYER | E25 | BUYER | | |
| E26 | PURCHASE ORDER | E26 | PURCHASE ORDER | | |
| E27 | PURCHASE ORDER ITEM | E27 | PURCHASE ORDER ITEM | | |
| E28 | PURCHASE ORDER CHANGE | E28 | PURCHASE ORDER CHANGE | | |
| E30 | CANDIDATE SUPPLIER | E30 | CANDIDATE SUPPLIER | 1008 | VENDOR |
| E31 | QUALIFIED SUPPLIER | E31 | QUALIFIED SUPPLIER | 1000 | VENDOR |
| E32 | SUPPLIER DELIVERY | E32 | SUPPLIER DELIVERY | | |
| E41 | TOOL SPECIFICATION | E41 | TOOL SPECIFICATION | | |
| DE: | TITLE: END | | ASS NAME CROSS REFERENCE | | INUMBER: |

2-125

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|--------------------------------------|---------|-------------------------------|------|--------------------|
| F.42 | TOOL DRAWING | E42 | TOOL DRAWING | | |
| E45 | TOOL TYPE | E45 | TOOL TYPE | | |
| E47 | OPERATION TOOL CALLOUT | E47 | OPERATION TOOL CALLOUT | | |
| E51 | EQUIPMENT | E51 | EQUIPMENT | 1 7 | |
| E.53 | OPERATOR | E53 | OPERATOR | | |
| E56 | MACHINE | E56 | MACHINE | | |
| E57 | PRODUCTION ORDER | E57 | PRODUCTION ORDER | | |
| E58 | STANDARD ROUTING | E58 | STANDARD ROUTING | | |
| F.63 | OPERATION STANDARD | E63 | OPERATION STANDARD | 1096 | OPERATION STANDARD |
| E66 | OPERATOR STATION ASSIGNMENT | E66 | OPERATOR STATION ASSIGNMENT | 7.77 | |
| F.68 | ENGINEERING BILL OF MATERIAL ITEM | E68 | ENGINEERING BILL OF MATERIAL | | |
| E69 | ENGINEERING RELEASE | E69 | ENGINEERING RELEASE | |) [*] ' |
| E74 | PROCESS PLAN MATERIAL CALLOUT | E74 | PROCESS PLAN MATERIAL CALLOUT | | A l |
| E79 | resource plan | E79 | RESOURCE PLAN | | |
| E81 | sales contract | E81 | SALES CONTRACT | | 72 |
| E84 | CONTRACT REVISION | E84 | CONTRACT REVISION | | () |
| E87 | MATERIAL RECEIPT | E87 | MATERIAL RECEIVE | .0. | |
| E88 | MANUFACTURE REQUEST | E88 | MANUFACTURE REQUEST | | () |
| E89 | MATERIAL ISSUE | E89 | MATERIAL ISSUE | | |
| E90 | SUPPLIER QUOTATION REQUEST | E90 | SUPPLIER QUOTATION REQUEST | | 1 |
| E91 | SUPPLIER QUOTATION | E91 | SUPPLIER QUOTATION | | |
| NODE: | TITLE: EN1 | TITY CL | ASS NAME CROSS REFERENCE | L | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|---|---------|--|-------|---------------------------|
| E92 | CONFORMANCE CERTIFICATION | E92 | CONFORMANCE CERTIFICATION | 1120 | CONFORMANCE CERTIFICATION |
| E93 | PART LOT | E93 | PART LOT | 1128 | PART LOT |
| E95 | MANUFACTURING PROCESS | E95 | MANUFACTURING PROCESS | | |
| E98 | EQUIPMENT CALLOUT | E98 | EQUIPMENT CALLOUT | | |
| F100 | STATION | E100 | STATION | 1119 | WORK CENTER CALLOUT |
| E105 | SKILL CERTIFICATION | E105 | SKILL CERTIFICATION | | |
| E106 | APPROVED CARRIER | E106 | APPROVED CARRIER | | |
| E107 | SUPPLIER INVOICE | E107 | SUPPLIER INVOICE | | |
| F.109 | DEVIATION WAIVER | E109 | DEVIATION WAIVER | | |
| E113 | SUPPLIER RETURN | E113 | SUPPLIER RETURN | | |
| E114 | CONTRACT ITEM | E114 | CONTRACT ITEM | | |
| E116 | EMPLOYEE | E116 | EMPLOYEE | 2 - H | |
| E118 | ENGINEERING BILL OF MATERIAL | E118 | ENGINEERING BILL OF MATERIAL | | |
| E119 | ENGINEERING CHANGE ITEM | F119 | ENGINEERING CHANGE ITEM | | |
| E120 | PART SPECIFICATION | E120 | PART SPECIFICATION | | |
| E123 | ENGINEERING DRAWING CHANGE | E123 | ENGINEERING DRAWING CHANGE | 1 | |
| E126 | ENGINEERING SPECIFICATION CHANGE | E1236 | ENGINEERING SPECIFICATION CHANGE | | |
| E130 | ENGINEERING BILL OF MATERIAL DRAWING CALLOUT | E130 | ENGINEERING BILL OF MATERIAL DRAWING CALLOUT | | |
| E131 | ROUTING ITEM | E131 | ROUTING ITEM | | |
| E132 | SALES ORDER ITEM | E132 | SALES ORDER ITEM | | |
| E134 | REFERENCE DRAWING | E134 | REFERENCE DRAWING | | turning. |
| DDE: | TITLE: EN | TITY CL | ASS NAME CROSS REFERENCE | | NUMBER: |

PART DRAWING

ENTITY CLASS NAME CROSS REFERENCE

MFG1 REV1

EC #

QA1

NUMBER:

EC #

MFG1 REV2

TITLE:

EC #

NODE:

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|------|--|------|--|------|-----|
| E182 | ENGINEERING DRAWING USE FOR REQUESTED PART | E182 | ENGINEERING DRAWING USE FOR REQUESTED PART | | |
| E183 | PURCHASE ORDER APPROVAL AUTHORITY | E183 | PURCHASE ORDER APPROVAL AUTHORITY | | |
| E186 | ASSIGNED SUPPLIER | E186 | ASSIGNED SUPPLIER | | |
| E187 | REQUESTED PURCHASE PART TRACEABILITY | E187 | REQUESTED PURCHASE PART TRACEABILITY | 1 . | |
| E188 | ORDERED PART | E188 | ORDERED PART | | |
| E189 | PURCHASE ORDER DRAWING CALLOUT | E189 | PURCHASE ORDÉR DRAWING CALLOUT | | |
| E190 | PURCHASE ORDER SPECIFICATION CALLOUT | E190 | PURCHASE ORDER SPECIFICATION CALLOUT | | |
| E191 | PURCHASE ORDER APPROVAL | E191 | PURCHASE ORDER APPROVAL | | 1, |
| E192 | CONTRACT PURCHASE ORDER | E192 | CONTRACT PURCHASE ORDER | | |
| E193 | ASSIGNED CARRIER | E193 | ASSIGNED CARRIER | | |
| E194 | PURCHASE REQUEST CHANGE APPROVAL | E194 | PURCHASE REQUEST CHANGE APPROVAL | | |
| E195 | PURCHASE REQUEST ITEM CHANGE EFFECTIVITY | E195 | PURCHASE REQUEST ITEM CHANGE EFFECTIVITY | | |
| E196 | BUYER ASSIGNMENT | E196 | BUYER ASSIGNMENT | | |
| E197 | PURCHASE ORDER ITEM CHANGE EFFECTIVITY | E197 | PURCHASE ORDER ITEM CHANGE EFFECTIVITY | | |
| E198 | PURCHASE ORDER ITEM CHANGE TRACEABILITY | E198 | PURCHASE ORDER ITEM CHANGE TRACEABILITY | | |

| EC # | MFG1 REV2 | EC# | MFG1 REV1 | EC # | QA1 |
|------|---|---------|---|------|-----------|
| E199 | PURCHASE ORDER CHANGE APPROVAL | E199 | PURCHASE ORDER CHANGE APPROVAL | | |
| E209 | SERIALIZED RAW MATERIAL REQUIREMENT | E209 | SERIALIZED RAW MATERIAL REQUIREMENT | | |
| E211 | RAW MATERIAL LOT REQUIREMENT | E211 | RAW MATERIAL LOT REQUIREMENT | | |
| E212 | RAW MATERIAL DRAWING CALLOUT | E212 | RAW MATERIAL DRAWING CALLOUT | | |
| E213 | SERIALIZED PART CONFORMANCE CERTIFICATION | E213 | SERIALIZED PART CONFORMANCE CERTIFICATION | | |
| E214 | INSPECTOR | E214 | INSPECTOR | 1083 | INSPECTOR |
| E215 | PART LOT CONFORMANCE CERTIFICATION | E215 | PART LOT CONFORMANCE CERTIFICATION | | |
| E217 | PRODUCTION ORDER APPROVAL AUTHORITY | E217 | PRODUCTION ORDER APPROVAL AUTHORITY | | |
| E218 | PRODUCTION ORDER APPROVAL | E218 | PRODUCTION ORDER APPROVAL | | |
| E219 | MANUFACTURING PLANNER | E219 | MANUFACTURING PLANNER | | |
| E220 | STANDARD ROUTING CALLOUT | E220 | STANDARD ROUTING CALLOUT | | |
| E221 | PART LOT ASSIGNMENT | E221 | PART LOT ASSIGNMENT | | |
| E222 | SERIALIZED PART SOURCE LOT | E222 | SERIALIZED PART SOURCE LOT | | |
| E223 | CONTRACT PRODUCTION ORDER | E223 | CONTRACT PRODUCTION ORDER | | |
| E224 | PROCESS PLAN PART DRAWING CALLOUT | E224 | PROCESS PLAN PART DRAWING CALLOUT | | |
| E225 | RAW MATERIAL SPECIFICATION CALLOUT | E225 | RAW MATERIAL SPECIFICATION CALLOUT | | |
| E226 | STOCK LOCATION | E226 | STOCK LOCATION | | |
| ODE: | TITLE: FN- | CITY CI | ASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC# | QA1 |
|-------|--|--------|--|-----|---------|
| | | | | | |
| E227 | STOCK LOCATION USE FOR PART | E227 | STOCK LOCATION USE FOR PART | | |
| E228 | SERIALIZED PART STOCK LOCATION | E228 | SERIALIZED PART STOCK LOCATION | | |
| E229 | PART LOT STOCK LOCATION | E229 | PART LOT STOCK LOCATION | 1 1 | |
| E230 | COMPONENT PART CALLOUT | E230 | COMPONENT PART CALLOUT | | |
| E233 | SERIALIZED COMPONENT PART REQUIREMENT | E233 | SERIALIZED COMPONENT PART REQUIREMENT | | |
| E234 | COMPONENT PART LOT REQUIRE- MENT | E234 | COMPONENT PART LOT REQUIRE- MENT | | |
| E236 | EMPLOYEE SKILL | E236 | EMPLOYEE SKILL | | |
| E237 | EQUIPMENT SKILL REQUIREMENT | E237 | EQUIPMENT SKILL REQUIREMENT | | |
| E238 | PROCESS SKILL REQUIREMENT | E238 | PROCESS SKILL REQUIREMENT | | |
| E240 | STATION EQUIPMENT LOCATION | E240 | STATION EQUIPMENT LOCATION | | |
| E242 | STATION/PROCESS | E242 | STATION/PROCESS | | |
| E243 | CUSTOMER TOOL | E243 | CUSTOMER TOOL | | |
| E244 | CUSTOMER TOOL CALLOUT | E244 | CUSTOMER TOOL CALLOUT | | |
| E246 | COMPANY TOOL | E245 | COMPANY TOOL | | |
| E247 | COMPANY TOOL CALLOUT | E247 | COMPANY TOOL CALLOUT | 1 1 | |
| E249 | CUSTOMER TOOL CONFORMANCE CERTIFICATION | E249 | CUSTOMER TOOL CONFORMANCE CERTIFICATION | | |
| F.250 | COMPANY TOOL CONFORMANCE CERTIFICATION | E250 | COMPANY TOOL CONFORMANCE CERTIFICATION | | |
| E251 | EQUIPMENT SPECIFICATION CALLOUT | E251 | EQUIPMENT SPECIFICATION CALLOUT | | |
| NODE: | | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| | EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 | |
|---|------|--|------|--|------|-----------|--|
| 1 | E252 | TOOL SPECIFICATION CALLOUT | E252 | TOOL SPECIFICATION CALLOUT | | | |
| 1 | E254 | STANDARD ROUTING USE | E254 | STANDARD ROUTING USE | | | |
| ı | E255 | PART/PROCESS SPECIFICATION US | E255 | PART/PROCESS SPECIFICATION US | Ε | | |
| l | E256 | PROCESS SPECIFICATION CALLOUT | E256 | PROCESS SPECIFICATION CALLOU | | | |
| ı | E257 | CUSTOMER EQUIPMENT REQUIREMEN | E257 | CUSTOMER EQUIPMENT REQUIREMEN | п | | |
| ı | E259 | CUSTOMER EQUIPMENT INSTANCE | E259 | CUSTOMER EQUIPMENT INSTANCE | 1125 | EQUIPMENT | |
| ı | E260 | OWNED EQUIPMENT INSTANCE | E260 | OWNED EQUIPMENT INSTANCE | 1125 | EQUIPMENT | |
| ı | E261 | OWNED EQUIPMENT REQUIREMENT | E261 | OWNED EQUIPMENT REQUIREMENT | | | |
| | E264 | CUSTOMER EQUIPMENT CONFORMANCE CERTIFICATION | E26^ | CUSTOMER EQUIPMENT CONFORMANCE CERTIFICATION | | | |
| | E265 | OWNED EQUIPMENT CONFORMANCE CERTIFICATION | E265 | OWNED EQUIPMENT CONFORMANCE CERTIFICATION | | | |
| | E266 | DELIVERY REJECTION | E266 | DELIVERY REJECTION | | | |
| | E267 | DELIVERY CONFORMANCE CERTIFICATION | E267 | DELIVERY CONFORMANCE CERTIFICATION | | | |
| | E268 | PURCHASED PART REJECTION | E268 | PURCHASED PART REJECTION | | | |
| | E269 | PURCHASED PART CONFORMANCE CERTIFICATION | E269 | PURCHASED PART CONFORMANCE CERTIFICATION | | | |
| | E270 | PURCHASED PART SPECIFICATION NON-CONFORMANCE | E270 | PURCHASED PART SPECIFICATION NON-CONFORMANCE | | | |
| | E271 | PURCHASED PART DRAWING NON- CONFORMANCE | E271 | PURCHASED PART DRAWING NON- CONFORMANCE | | | |
| | E272 | PURCHASED PART SPECIFICATION CONFORMANCE | E272 | PURCHASED PART SPECIFICATION CONFORMANCE | | | |
| 2 | ODE: | CONFORMANCE | | | | NUMBER: | |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|--|--------|--|------|---------|
| E273 | PURCHASED PART DRAWING CONFORMANCE | E273 | PURCHASED PART DRAWING CONFORMANCE | | |
| E274 | DELIVERING CARRIER | E274 | DELIVERING CARRIER | 1 | |
| E275 | ASSIGNED CARRIER USED AS DELIVERING CARRIER | E275 | ASSIGNED CARRIER USED AS DELIVERING CARRIER | | |
| E276 | CUSTOMER EQUIPMENT STATION ASSIGNMENT | E276 | CUSTOMER EQUIPMENT STATION ASSIGNMENT | | |
| E277 | OWNED EQUIPMENT STATION ASSIGNMENT | E277 | OWNED EQUIPMENT STATION ASSIGNMENT | | |
| E278 | CUSTOMER EQUIPMENT TYPE | E278 | CUSTOMER EQUIPMENT TYPE | | |
| E279 | OWNED EQUIPMENT TYPE | E279 | OWNED EQUIPMENT TYPE | 1 1 | |
| E280 | REQUIREMENT FOR CUSTOMER EQUIPMENT TYPE | E280 | REQUIREMENT FOR CUSTOMER EQUIPMENT TYPE | | |
| E282 | REQUIREMENT FOR OWNED EQUIPMENT TYPE | E282 | REQUIREMENT FOR OWNED EQUIPMENT TYPE | | |
| E284 | CUSTOMER TOOL TYPE | E284 | CUSTOMER TOOL TYPE | | |
| E285 | COMPANY OWNED TOOL TYPE | E285 | COMPANY OWNED TOOL TYPE | | |
| E286 | REQUIREMENT FOR CUSTOMER TOOL TYPE | E286 | REQUIREMENT FOR CUSTOMER TOOL TYPE | | |
| E288 | REQUIREMENT FOR COMPANY TOOL TYPE | E288 | REQUIREMENT FOR COMPANY TOOL TYPE | | |
| E290 | TOOL SKILL REQUIREMENT | E290 | TOOL SKILL REQUIREMENT | | |
| E291 | STATION/TOOL LOCATION | LE291 | STATION/TOOL LOCATION | | |
| E292 | CUSTOMER TOOL STATION ASSIGNMENT | E292 | CUSTOMER TOOL STATION ASSIGNMENT | | |
| IODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | L | NUMBER: |

-134

8 September 19

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|---|---------|---|------|---------|
| E313 | PURCHASE REQUEST ITEM UNIT OF MEASURE | E313 | PURCHASE REQUEST ITEM UNIT OF MEASURE | | |
| E314 | PURCHASE REQUEST ITEM DELIVERY REQUIREMENT | E314 | PURCHASE REQUEST ITEM DELIVERY REQUIREMENT | | |
| E315 | PURCHASE ORDER ITEM DELIVERY REQUIREMENT | E315 | PURCHASE ORDER ITEM DELIVERY REQUIREMENT | | |
| E316 | PURCHASE ORDER ITEM UNIT OF MEASURE | E316 | PURCHASE ORDER ITEM UNIT OF MEASURE | | |
| E317 | WORK BREAKDOWN STRUCTURE USE | E317 | WORK BREAKDOWN STRUCTURE USE | | |
| | FOR PURCHASE ORDER ITEM | | FOR PURCHASE ORDER ITEM | | |
| E318 | NUMERICAL CONTROL PROGRAM | E318 | NUMERICAL CONTROL PROGRAM | | |
| E319 | NUMERICAL CONTROL PROGRAM CALLOUT | E319 | NUMERICAL CONTROL PROGRAM CALLOUT | | |
| E320 | MACHINE INSTRUCTION | E320 | MACHINE INSTRUCTION | | |
| E321 | NUMERICAL CONTROL PROGRAM MACHINE USE | E321 | NUMERICAL CONTROL PROGRAM MACHINE USE | | |
| F.322 | QUALITY ASSURANCE NEED | E322 | QUALITY ASSURANCE NEED | | |
| E323 | SERIALIZED SUPPLIER PART SOURCE LOT | E323 | SERIALIZED SUPPLIER PART SOURCE LOT | | |
| E324 | PART SPECIFICATION REQUIREMENT | E324 | PART SPECIFICATION REQUIREMENT | | |
| E325 | SUPPLIER PART LOT STOCK LOCATION | E325 | SUPPLIER PART LOT STOCK LOCATION | | |
| E326 | EMPLOYEE TRAINING | E326 | EMPLOYEE TRAINING | | () |
| ODE: | TITLE: EN | TITY CL | ASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|---|--------|---|------|---|
| E348 | PROJECT | E348 | PROJECT | | |
| E349 | TYPE-VERSION SHIP | E349 | TYPE-VERSION SHIP | | |
| E350 | STATION CALLOUT | E350 | STATION CALLOUT | | |
| E351 | INDEX | E351 | INDEX | | |
| F.352 | CONFIGURATION BASELINE | E352 | CONFIGURATION BASELINE | | |
| E353 | MILESTONE | E353 | MILESTONE | | |
| E354 | ENGINEERING CHANGE REQUEST | E354 | ENGINEERING CHANGE REQUEST | | |
| E355 | ORGA: 'IZATION TASK | E355 | ORGANIZATION TASK | | |
| E358 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE PROPOSAL | E358 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE PROPOSAL | | |
| E359 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE REQUEST | E359 | ENGINEERING ORDER USE FOR ENGINEERING CHANGE REQUEST | | |
| F.360 | MASTER CHANGE RECORD | E360 | MASTER CHANGE RECORD | | |
| E361 | APPROVED ENGINEERING ORDER | E361 | APPROVED ENGINEERING ORDER | | |
| E362 | TEST REQUIREMENT | E362 | TEST REQUIREMENT | | |
| E363 | SECTION | E363 | SECTION | | 4-2 |
| E364 | METHOD USE | E364 | METHOD USE | | |
| E365 | SCHEDULE CHANGE AUTHORIZATION | E365 | SCHEDULE CHANGE AUTHORIZATION | | |
| E366 | TYPE-VERSION SHIP CALLOUT | E366 | TYPE-VERSION SHIP CALLOUT | | |
| E367 | CONFIGURED ITEM | E367 | CONFIGURED ITEM | | 0.604600 |
| E368 | MATERIAL | E368 | MATERIAL | 1115 | MATERIAL |
| E370 | MATERIAL PLAN | E370 | MATERIAL PLAN | | V 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| ODE: | TITLE: EN | TITY C | LASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|--|---------|--|------|------------------|
| E371 | MANPOWER PLAN | E371 | MANPOWER PLAN | | |
| E372 | TOOLING PLAN | E372 | TOOLING PLAN | | |
| E373 | FACILITIES PLAN | E373 | FACILITIES PLAN | | |
| E374 | QUALITY CONTROL PLAN | E374 | QUALITY CONTROL PLAN | | |
| E375 | EQUIPMENT PLAN | E375 | EQUIPMENT PLAN | | |
| E377 | PLANNING PARTS LIST ITEM | E377 | PLANNING PARTS LIST ITEM | | |
| E378 | CUTTING SPECIFICATION | E378 | CUTTING SPECIFICATION | | |
| E379 | VISUAL AID | E379 | VISUAL AID | | |
| E380 | WORK PACKAGE | E380 | WORK PACKAGE | | 1 |
| E381 | APPROVED CONFIGURATION BASELINE | E381 | APPROVED CONFIGURATION BASELINE | | |
| F.382 | MATERIAL NEED | E382 | MATERIAL NEED | | |
| E383 | END ITEM METHOD OCCURRENCE | E383 | END ITEM METHOD OCCURRENCE | | |
| E384 | RESCHEDULED MILESTONE | E384 | RESCHEDULED MILESTONE | | |
| E385 | DRAWING MATERIAL CALLOUT | E385 | DRAWING MATERIAL CALLOUT | 1005 | MATERIAL CALLOUT |
| E386 | PLANNED MANUFACTURING OPERATION MATERIAL REQUIREMENT | E386 | PLANNED MANUFACTURING OPERATION MATERIAL REQUIREMENT | | |
| E387 | END ITEM REQUIREMENT FOR PART | E387 | END ITEM REQUIREMENT FOR PART | | |
| E388 | FABRICATION LOT SUBACCOUNT | E388 | FABRICATION LOT SUBACCOUNT | | |
| E389 | END ITEM WORK ELEMENT | E389 | END ITEM WORK ELEMENT | | |
| E390 | END ITEM REQUIREMENT FOR DRAWING | E390 | END ITEM REQUIREMENT FOR DRAWING | | |
| ODE: | TITLE: EN | TITY CI | ASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 | |
|-------|---|---------|---|------|---------|--|
| E391 | ENGINEERING ORDER APPLICABILITY TO END ITEM | E391 | ENGINEERING ORDER APPLICABILITY TO END ITEM | | | |
| E392 | CUTTING SPECIFICATION CALLOUT | E392 | CUTTING SPECIFICATION CALLOUT | | | |
| E393 | CHANGE REQUEST DRAWING CALLOUT | E392 | CHANGE REQUEST DRAWING CALLOUT | | | |
| E395 | VISUAL AID CALLOUT | E395 | VISUAL AID CALLOUT | | 1 | |
| E396 | PLANNING PARTS LIST | E396 | PLANNING PARTS LIST | | | |
| E397 | PART REQUIREMENT FOR MATERIAL | E397 | PART REQUIREMENT FOR MATERIAL | | | |
| E398 | DELIVERY SCHEDULE ITEM | E398 | DELIVERY SCHEDULE | | | |
| E399 | RESOURCE NEED | E399 | RESOURCE NEED | | A | |
| E400 | MANPOWER NEED | E400 | MANPOWER NEED | | | |
| E401 | TOOLING NEED | E401 | TOOLING NEED | | | |
| E402 | FACILITIES NEED | E402 | FACILITIES NEED | | | |
| E403 | EQUIPMENT NEED | E403 | EQUIPMENT NEED | | | |
| E404 | DRAWING APPLICABILITY TO CONFIGURATION BASELINE | E404 | DRAWING APPLICABILITY TO CONFIGURATION BASELINE | | | |
| E405 | PART SHORTAGE | E405 | PART SHORTAGE | | | |
| F.406 | STOP ORDER | E406 | STOP ORDER | | | |
| E407 | AVAILABILITY OF MATERIAL | E407 | AVAILABILITY OF MATERIAL | | | |
| E408 | STOP ORDER APPLICATION | E408 | STOP ORDER APPLICATION | | | |
| E409 | SCHEDULED PART | E409 | SCHEDULED PART | | | |
| ODE: | TITLE: ENT | TITY CL | ASS NAME CROSS REFERENCE | | NUMBER: | |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|-------|---|---------|---|------|-----------------------------------|
| E411 | PRODUCTION ORDER MATERIAL CALLOUT | E411 | PRODUCTION ORDER MATERIAL CALLOUT | | |
| E412 | PART SHORTAGE RECONCILIATION | E412 | PART SHORTAGE RECONCILIATION | | A . |
| E413 | FACILITY SPECIFICATION | E413 | FACILITY SPECIFICATION | | |
| E414 | DRAWING | E414 | DRAWING | | |
| E415 | PROCESS PLAN | E415 | PROCESS PLAN | | |
| E416 | ROUTING HEADER | E416 | ROUTING HEADER | | |
| E417 | ROUTING ITEM/STANDARD ROUTING | E417 | ROUTING ITEM/STANDARD ROUTING | | |
| E418 | PROCESS PLANNER | E418 | PROCESS PLANNER | | |
| E420 | PROCESS FLAN USE AS PRODUCTION ORDER | E420 | PROCESS PLAN USE AS PRODUCTION ORDER | | 1.5 |
| E421 | PLANNED MANUFACTURING OPERATION | E421 | PLANNED MANUFACTURING OPERATION | 1029 | INSTRUCTION |
| E422 | ORGANIZATION | E422 | ORGANIZATION | | |
| E423 | COMPONENT ORGANIZATION | E423 | COMPONENT ORGANIZATION | 1 3 | |
| E424 | FIRST ARTICLE EVALUATION | | | 1133 | FIRST ARTICLE EVALUATION |
| E425 | INSPECTION EVALUATION | | | 1136 | INSPECTION EVALUATION |
| E426 | MAJOR NON-CONFORMANCE | | | 1134 | MAJOR NON-CONFORMANCE |
| E427 | MRB DISPOSITION | | | 1126 | MATERIAL REVIEW BOARD DISPOSITION |
| E428 | MINOR NON-CONFORMANCE | | | 1135 | MINOR NON-CONFORMANCE |
| NODE: | TTITLE: | | | | Jaumoro. |
| | EN1 | TITY CL | ASS NAME CROSS REFERENCE | | NUMBER: |

| EC # | MFG1 REV2 | EC # | MFG1 REV1 | EC # | QA1 |
|----------------------|--|------|-----------------------|----------------------|---|
| E429 E430 E431 | NON-CONFORMING ITEM STANDARD REPAIR CALLOUT QA UNIT* | | | 1121 1048 1130 | NON-CONFORMING ITEM STANDARD REPAIR CALLOUT WORK PACKAGE* |
| | | | | | |
| | | | | | |
| DDE: | *Introduced to current syntax | | S NAME CROSS REFERENC | | *Not used |

Section 2.6

QA1 ATTRIBUTE CLASS NAME CROSS REFERENCE USE

SADT DIAGRAM FORM ST098 9/75

Form © 1975 SofTech, Inc., 460 Totten Pond Road, Waltham, Mass. 02154, USA

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|----------|-----------------------------|-------|-------------|--------|------|----------|
| | PROJECT: | REV: | DRAFT | | | |
| | | | RECOMMENDED | | | |
| | NOTES: 1 2 3 4 5 6 7 8 9 10 | | PUBLICATION | | | |

THE FOLLOWING ATTRIBUTE CLASS NAME CROSS REFERENCE IDENTIFIES THE SOURCE MODEL OR MODELS FROM WHICH EACH COMPOSITE VIEW ATTRIBUTE CLASS WAS DERIVED. IT IS SEQUENCED ALPHABETICALLY BY COMPOSITE VIEW ATTRIBUTE CLASS NAME AND LISTS THE MFG1 ATTRIBUTE CLASS NAME AND/OR THE QA1 ATTRIBUTE CLASS NAME. THE UNDERLINED ATTRIBUTE CLASS NAMES ARE KEY ATTRIBUTE CLASSES.

-14

NODE:

FTR110410000U 8 September 1983

NUMBER:

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--------------------------------------|--------------------------------------|---------|
| Academic Qualification | Academic Qualification | |
| Acknowledgement Code (P.O.) | Acknowledgement Code (P.O.) | |
| Acknowledgement Reminder Date (P.O.) | Acknowledgement Reminder Date (P.O.) | |
| Activity Information | Activity Information | |
| Activity Name | Activity Name | |
| Activity No. | Activity No. | |
| Actual Labor Costs to Date | Actual Labor Costs to Date | |
| Actual Labor Hours to Date | Actual Labor Hours to Date | |
| Actual Machine Hours to Date | Actual Machine Hours to Date | |
| Actual Material Cost to Date | Actual Material Cost to Date | |
| Actual Start Date | Actual Start Date | |
| Actual Completion Date | Actual Completion Date | |
| Allocation Impact | Allocation Impact | |
| Annual Commitment Forecast | Annual Commitment Forecast | |
| Assembly Class Name | Assembly Class Name | |
| Bill of Material Item No. | Bill of Material Item No. | |
| Buyer Estimate | Buyer Estimate | |
| Buyer Name | Buyer Name | |
| Buyer No. | Buyer No. | |
| Carrier Name | Carrier Name | |
| Carrier No. | Carrier No. | |
| Charge No. (SOW) | Charge No. (SOW) | |
| DE: TITLE: | E CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|---|---|---------|
| Change Description (SOW) | Change Description (SOW) | |
| Classification Code | Classification Code | |
| Class Type | Class Type | |
| Configurated Item Affected | Configurated Item Affected | |
| Configuration Item Serial No. | Configurated Item Serial No. | |
| Configuration Baseline Approval Date | Configuration Baseline Approval Date | |
| Configuration Baseline No. | Configuration Baseline No. | |
| Configuration Review Board Document No. | Configuration Review Board Document No. | |
| Conformance Certification No. | Conformance Certification No. | |
| Contract Approval Date | Contract Approval Date | |
| Contract Date | Contract Date | |
| Contract Delivery Rate | Contract Delivery Rate | |
| Contract Item No. | Contract Item No. | |
| Contract Name | Contract Name | |
| Contract Item No. | Contract Item No. | |
| Contract No. | Contract No. | |
| Contract Project No. | Contract Project No. | |
| Contract Requirement Effective Date | Contract Requirement Effective Date | |
| Contract Revision No. | Contract Revision No. | |
| Customer Tool No. | Customer Tool No. | |
| Contract Type | Contract Type | |
| Cost Account Name | Cost Account Name | |
| DE: TITLE: | | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 | |
|----------------------------|------------------------------|---------|---|
| Cost Account No. | Cost Account No. | | |
| Cost Estimate | Cost Estimate | | 1 |
| Cost Source | Cost Source | | |
| Cost Summary | Cost Summary | | |
| Customer No. | Customer No. | | |
| Customer Tool Crew-Size | Customer Tool Crew-Size | | |
| Customer Tool Description | Customer Tool Description | | |
| Customer Tool Order No. | Customer Tool Order No. | | |
| Customer Tool Quantity | Customer Tool Quantity | | |
| Cutting Spec. ID | Cutting Spec. ID | | |
| Date Required | Date Required | | |
| Date Closed | Date Closed | | |
| Delivery Schedule Item No. | Delivery Schedule Item No. | | |
| Deviation Waiver No. | Deviation Waiver No. | | |
| Drawing Approval Date | Drawing Approval Date | | |
| Drawing Bill of Material | Drawing Bill of Material | | |
| Drawing Name | Drawing Name | | |
| Drawing Next Assembly | Drawing Next Assembly | | |
| Drawing No. | Drawing No. | | |
| Drawing Revision Letter | Drawing Revision Letter | | c |
| Earliest Start Date | Earliest Start Date | | 6 |
| Employee Name | Employee Name | | TOO |
| ODE: TITLE: | RIBUTE CLASS CROSS-REFERENCE | NUMBER: | |

FTR110410000U

| MFG1 REV2 | MFG1 REV2 | QA1 | |
|---|---|-----|--|
| Employee No. | Employee No. | | |
| Employee Sex | Employee Sex | | |
| Employee Skill Class | Employee Skill Class | | |
| End Item Description | End Item Description | | |
| End Item Major Assembly Scheduled In-Work Date | End Item Major Assembly Scheduled In-Work Date | | |
| End Item Major Assembly Scheduled | End Item Major Assembly Scheduled | | |
| Delivery Date | Delivery Date | | |
| End Item Serial No. | End Item Serial No. | | |
| Eng. Change Item No. | Eng. Change Item No. | | |
| Eng. Change Proposal No. | Eng. Change Proposal No. | | |
| Eng. Change No. | Eng. Change No. | | |
| Eng. Change Request Approval | Eng. Change Request Approval | | |
| Eng. Change Request Date | Eng. Change Request Date | | |
| Eng. Change Request Description | Eng. Change Request Description | | |
| Eng. Change Request No. | Eng. Change Request No. | | |
| Eng. Change Request Originator | Eng. Change Request Originator | | |
| Eng. Order Approval Date | Eng. Order Approval Date | | |
| Eng. Order No. | Eng. Order No. | | |
| Eng. Specification No. | Eng. Specification No. | | |
| Equipment Availability Standard | Equipment Availability Standard | | |
| Equipment Description | Equipment Description | | |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|-------------------------------|-------------------------------|--------------------------|
| Equipment Downtime Standard | Equipment Downtime Standard | |
| Equipment Property No. | Equipment Property No. | |
| Est. Cost (P.O.) | Est. Cost (P.O.) | |
| Est. Tool Life | Est. Tool Life | |
| Est. Unit Price (PRI) | Est. Unit Price (PRI) | |
| Estimator | Estimator | |
| Expedite Date (P.O.) | Expedite DAte (P.O.) | |
| Expected Acknowledgement Date | Expected Acknowledgement Date | 1 |
| External Priority | External Priority | 1 |
| Fabrication Hours | Fabrication Hours | 1 |
| Flow Span of Assembly | Flow Span of Assembly | 1 |
| Formal Planning Hours | Formal Planning Hours | |
| Formal Planning Quantity | Formal Planning Quantity | |
| Fuselage Sequence No. | Fuselage Sequence No. | 1 |
| Generation Date | Generation Date | |
| Go Ahead By | Go Ahead By | |
| Index No. | Index No. | |
| Inspection Code (Tool) | Inspection Code (Tool) | |
| Inspection Evaluation ID | | Inspection Evaluation ID |
| Inspector No. | Inspector No. | |
| Installation Responsibility | Installation Responsibility | |
| Instruction | Instruction | |
| DE: TITLE: | SUTE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--|--|---------------------------|
| Issue No. | Issue No. | |
| Item Description | Item Description | |
| Latest Start Date | Latest Start Date | |
| Last Change Date of Purchase Requisition | Last Change Date of Purchase Requisition | |
| Leadtime | Leadtime | |
| Length of Quotation | Length of Quotation | |
| Length of Quotation Validity | Length of Quotation Validity | |
| Library Code | Library Code | |
| Line Item Description | Line Item Description | |
| Line No. | Line No. | |
| Line Position | Line Position | |
| Low Level Code | Low Level Code | |
| Machine Dimensions (Eq.) | Machine Dimensions (Eq.) | |
| Machine Hour Rate | Machine Hour Rate | |
| Machine Instruction No. | Machine Instruction No. | |
| Machine Weight | Machine Weight | |
| Major Assembly Break | Major Assembly Break | |
| Major Non-Conformance No. | | Major Non-Conformance No. |
| Make/Buy Code | Make/Buy Code | |
| Management Program Review Board Directive No. | Management Program Review Board Directive No. | |
| DE: TITLE: | UTE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|----------------------------|------------------------------|---------------------------|
| Manufacturing Day | Manufacturing Day | |
| Manufacture Request No. | Manufacture Request No. | |
| Manufacturing Planner No. | Manufacturing Planner No. | A\$// |
| Manufacturing Process Name | Manufacturing Process Name | |
| Manufacturing Process No. | Manufacturing Process No. | |
| Manufacturing Request No. | Manufacturing Request No. | 1 |
| Master Change Record No. | Master Change Record No. | |
| Material Allocation | Material Allocation | 1 |
| Material Average Price | Material Average Price | |
| Raw Material Code/Part No. | Raw Material Code/Part No. | 1 |
| Material Commodity Group | Material Commodity Group | 7.10 |
| Material Description | Material Description | |
| Material Library Code | Material Library Code | |
| Machine Issue No. | Machine Issue No. | 1 |
| Material Quantity | Material Quantity | |
| Material Receipt No. | Material Receipt No. | |
| Material Specification | Material Specification | |
| Milestone Completion Date | Milestone Completion Date | |
| Milestone Description | Milestone Description | |
| Milestone In-Work Date | Milestone In-Work Date | |
| Minor Non-Conformance No. | | Minor Non-Conformance No. |
| Model | Model | |
| DE: TITLE: | RIBUTE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|-------------------------------|-------------------------------|---|
| Need Date | Need Date | u o o o o o o o o o o o o o o o o o o o |
| Non-Conforming Item No. | | Non-Conforming Item No. |
| Normal Start Time | Normal Start Time | |
| Normal Stop Time | Normal Stop Time | |
| Numerical Control Program No. | Numerical Control Program No. | 1 |
| Number of Ships | Number of Ships | l . |
| Operator No. | Operator No. | |
| Order Discount Terms | Order Discount Terms | |
| Organization ID | Organization ID | 1 |
| Other Changes (P.O.) | Other Changes (P.O.) | |
| Page No. | Page No. | |
| Part Cost | Part Cost | |
| Part Description | Part Description | ; |
| Part Lot Completion Date | Part Lot Completion Date | 1 |
| Part Lot In-Work Date | Part Lot In-Work Date | l . |
| Part Lot No. | Part Lot No. | |
| Part Lot Size | Part Lot Size | |
| Part Name | Part Name | |
| Part No. | Part No. | |
| Part Status Code | Part Status Code | |
| Part Unit of Measure | Part Unit of Measure | |
| DE: TITLE: | | NUMBER: |
| ATTR | BUTE CLASS CROSS-REFERENCE | |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|---|--|---------|
| Planned Manufacturing Operation Description | Planned Manufacturing Operation Description | |
| Planned Manufacturing Operation Run Time | Planned Manufacturing Operation Run Time | |
| Planned Manufacturing Operation Sequence No. | Planned Manufacturing Operation Sequence No. | |
| Planned Manufacturing Operation Set-Up Time | Planned Manufacturing Operation Set-Up Time | |
| Planned Order Release Date | Planned Order Release Date | 1 |
| Planning Parts List Item No. | Planning Parts List Item No. | |
| Planned Queue Time (Eq.) | Planned Queue Time (Eq.) | |
| Planning Type | Planning Type | |
| Prepared By | Prepared By | |
| Position Value | Position Value | |
| Pricing Estimate | Pricing Estimate | |
| Process Lead Time | Process Lead Time | |
| Process Plan Reason Code | Process Plan Reason Code | |
| Process Plan No. | Process Plan No. | |
| Processing Allocation | Processing Allocation | |
| Process Planner No. | Process Planner No. | |
| Production Control Board No. | Production Control Board No. | |
| Production Order Description | Production Order Description | |
| Production Order No. | Production Order No. | |
| Production Order Priority (Prod. A.) NODE: TITLE: | Production Order Priority (Prod. O.) | NUMBER: |
| ATTRIB | UTE CLASS CROSS-REFERENCE | |

FTR110410000U

| MFG1 REV2 | MFG1 REV2 | QA1 |
|---|---|----------|
| Production Order Quantity (Prod. O.) Production Order Schedule Date Production Type | Production Order Quantity (Prod. 0.) Production Order Schedule Date Production Type | |
| Program Name Project Name | Program Name Project Name | |
| Purchase Order Activity Code | Property No. Purchase Order Activity Code | |
| Purchase Order Change No. Purchase Order Date | Purchase Order Change No. Purchase Order Date | |
| Purchase Order Delivery Req'mt. No. Purchase Order Item No. | Purchase Order Delivery Req'mt. No. Purchase Order Item No. Purchase Order Last Change Date | |
| Purchase Order No. Purchase Order Revision Level | Purchase Order No. Purchase Order Revision Level | |
| Purchase Order Type Purchase Order Unit of Measure | Purchase Order Type Purchase Order Unit of Measure | |
| Purchase Request Change No. Purchase Request Unit of Measure | Purchase Request Change No. Purchase Request Unit of Measure | |
| Purchase Requisition Item No. Purchase Requisition No. | Purchase Requisition Item No. Purchase Requisition No. | |
| Purchase Request Revision Level Purchase Request Delivery Req'mt. No. | Purchase Request Revision Level Purchase Request Delivery Req'mt. Wo. | NUMBER: |
| DE: TITLE: ATTRIBU | TE CLASS CROSS-REFERENCE | NOWIDEN. |

| MFG1 REV2 | MFG1 REV2 | QA1 | |
|------------------------------------|------------------------------------|------------|--|
| QA Unit ID | | QA Unit ID | |
| Quantity Ordered (POI) | Quantity Ordered (POI) | | |
| Quantity of Formal Planning | Quantity of Formal Planning | | |
| Quantity of Positions | Quantity of Positions | | |
| Quantity Required (PRI) | Quantity Required (PRI) | | |
| Rate Per Week | Rate Per Week | | |
| Receiving Report Item No. | Receiving Report Item No. | | |
| Receiving Report No. | Receiving Report No. | | |
| Requisition Date | Requisition Date | | |
| Requested Carrier Name | Requested Carrier Name | | |
| Requested Supplier Name | Requested Supplier Name | | |
| Requested Supplier No. | Requested Supplier No. | | |
| Response No. | Response No. | | |
| Resource Category | Resource Category | | |
| Return Order No. | Return Order No. | | |
| Revision No. | Revision No. | | |
| Rework Order No. | Rework Order No. | | |
| Routing Item No. | Routing Item No. | | |
| Sales Order Item No. | Sales Order Item No. | | |
| Sales Order Name | Sales Order Name | | |
| Sales Order ID | Sales Order ID | | |
| Scheduled Activity Completion Date | Scheduled Activity Completion Date | | |
| DE: TITLE: | | NUMBER: | |
| ATTRIBU | TE CLASS CROSS-REFERENCE | | |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--|--|---------------------|
| Schedule Change Authorization Approval Date | Schedule Change Authorization Approval Date | |
| Scheduled Activity Start Date | Scheduled Activity Start Date | |
| Schedule Change Authorization Line No. | Schedule Change Authorization Line | No. |
| Schedule Change Request No. | Schedule Change Request No. | |
| Schedule Date | Schedule Date | |
| Scheduled Delivery Date | Scheduled Delivery Date | |
| Scheduled Due Date | Scheduled Due Date | |
| Scheduled Release Date | Scheduled Release Date | |
| Schedule No. | Schedule No. | |
| Scrap Order No. | Scrap Order No. | |
| Section No. | Section No. | |
| Section Title | Section Title | |
| Serial No. | <u>Serial No</u> | |
| Sheet No. | Sheet No. | |
| Shift No. | Shift No. | |
| Ship To Location | Ship To Location | |
| Shortage Control No. | Shortage Control No. | |
| Skill Certification No. | Skill Certification No. | |
| Skill Classification | Skill Classification | |
| Specification No. | Specification No. | |
| Standard Repair No. | | Standard Repair No. |
| E: TITLE: | | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--------------------------------|--------------------------------|---------|
| Std. Labor Cost To Date | Std. Labor Cost To Date | |
| Std. Labor Hours To Date | Std. Labor Hours To Date | |
| Std. Machine Hours To Date | Std. Machine Hours To Date | |
| Std. Material Cost To Date | Std. Material Cost To Date | |
| Standard Routing No. | Standard Routing No. | |
| Start Date | Start Date | |
| Station Crew Size | Station Crew Size | |
| Station Function | Station Function | |
| Station Location | Station Location | |
| Station No. | Station No. | |
| Station Nomenclature | Station Nomenclature | |
| Status Code (Prod. O.) | Status Code (Prod. 0.) | A) |
| Stock Location No. | Stock Location No. | |
| Stop Order No. | Stop Order No. | |
| Subject | Subject | |
| Supplement No. | Supplement No. | 13 |
| Supplier Address | Supplier Address | |
| Supplier Audit Expiration Date | Supplier Audit Expiration Date | 1 |
| Supplier Business Size Code | Supplier Business Size Code | 1 |
| Supplier Delivery Lot No. | Supplier Delivery Lot No. | |
| Supplier EEO Code | Supplier EEO Code | |
| Supplier Invoice No. | Supplier Invoice No. | i i |
| ODE: TITLE: ATTRIE | BUTE CLASS CROSS-REFERENCE | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--|---|---------|
| Supplier Name | Supplier Name | |
| Supplier No. | Supplier No. | |
| Supplier QA Code | Supplier QA Code | |
| Supplier Quotation No. | Supplier Quotation No. | |
| Supplier Quotation Request No. | Supplier Quotation Request No. | |
| Supplier Representative | Supplier Representative | |
| Supplier Security Clearance Code | Supplier Security Clearance Code | |
| Technical Requirement | Technical Requirement | |
| Test Code (Destruction/ Non-Destruction | Test Code (Destruction/ Non-Destruction) | |
| Test Description | Test Description | |
| Training Certification No. | Training Certification No. | |
| Tool Description | Tool Description | |
| Tool Property No. | Tool Property No. | |
| Tool Serial No. | Tool Serial No. | |
| Tool Weight | Tool Weight | |
| Type Code | Type Code | |
| Type of Change | Type of Change | |
| Type-Version Ship No. | Type-Version Ship No. | |
| Unit Cost | Unit Cost | |
| Unit Price (POI) | Unit Price (POI) | |
| <u>Visual Aid ID</u> | <u>Visual Aid ID</u> | |
| E: [TITLE: | | NUMBER: |

| MFG1 REV2 | MFG1 REV2 | QA1 |
|--|--|---------|
| WBS Item Description WBS No. Work Package Serial No. | WBS Item Description WBS No. Work Package Serial No. | |
| | | |
| | | |
| | | |
| | | |
| NODE: TITLE: ATTI | RIBUTE CLASS CROSS-REFERENCE | NUMBER: |

8

Section 2.7

ATTRIBUTE CLASS/ENTITY CLASS INDEX EXPLANATION

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|----------|------------------------|-------|-------------|--------|------|----------|
| 4-1-1-2 | PROJECT: | REV: | DRAFT | | | |
| | | | RECOMMENDED | | | |
| 19 | NOTES: 1 2 3 4 5 6 7 8 | 9 10 | PUBLICATION | | | |

THE FOLLOWING ATTRIBUTE CLASS/ENTITY CLASS INDEX IS AN ALPHABETIC LIST OF ALL MIGRATING ATTRIBUTE CLASSES, THEIR OWNER ENTITY CLASS AND THE INHERITING ENTITY CLASSES. EACH ATTRIBUTE CLASS IN THIS LIST IS CONTAINED IN THE KEY CLASS OF THE OWNER ENTITY CLASS. IT MAY OR MAY NOT BE CONTAINED IN THE KEY CLASS OF AN INHERITING ENTITY CLASS. THE INHERITANCE OF THE ATTRIBUTE CLASS MAY OCCUR DIRECTLY FROM THE OWNER ENTITY CLASS OR INDIRECTLY THROUGH ANOTHER INHERITING ENTITY CLASS.

2-1

September 198

91

NODE: TITLE: ATTRIBUTE CLASS/ENTITY CLASS INDEX EXPLANATION NUMBER

| ľ | • | | ١ | |
|---|---|---|---|--|
| • | ı | Ī | | |
| ı | • | | , | |
| ï | 1 | r | | |
| Ì | ř | | : | |
| 7 | • | | | |

| ATTRIBUTE CLASS | | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|----------------------------------|---|--|--|--|--|
| NAME | NO. | NAME | NO. | NAME | COD |
| Academic Qualification | 116 | Employee | | | 0 |
| Acknowledgement Code | 26 | Purchase Order | | | 0 |
| Acknowledgement Reminder Date | 26 | Purchase Order | | | 0 |
| Activity Information | 331 | Statement of Work | | | 0 |
| Activity Named | 346 | Activity Policy | | 1 | ОК |
| | | | 79 | Resource Plan | 1 |
| | | | 335 | Section Activity | 1K |
| | | | 12 | Rel Engrn Dwg | 1 |
| | | and the second | 364 | Method Use | 1K |
| Actual Completion Date | 57 | Production Order | | | 0 |
| Actual Labor Cost to Date | 57 | Production Order | | | 0 |
| Actual Labor Hours to Date | 57 | Production Order | | | 0 |
| Actual Machine Hours to Date | 57 | Production Order | | | 0 |
| Actual Material Cost to Date | 57 | Production Order | | | 0 |
| Actual Start Date | 57 | Production Order | | | 0 |
| | NAME Academic Qualification Acknowledgement Code Acknowledgement Reminder Date Activity Information Activity Named Activity Named Actual Completion Date Actual Labor Cost to Date Actual Labor Hours to Date Actual Machine Hours to Date Actual Material Cost to Date | Academic Qualification 116 Acknowledgement Code 26 Acknowledgement Reminder 26 Date Activity Information 331 Activity Named 346 Actual Completion Date 57 Actual Labor Cost to Date 57 Actual Labor Hours to Date 57 Actual Machine Hours to Date 57 Actual Material Cost to Date 57 Date | Academic Qualification 116 Employee Acknowledgement Code 26 Purchase Order Acknowledgement Reminder 26 Purchase Order Date Activity Information 331 Statement of Work Activity Named 346 Activity Policy Activity Named 57 Production Order Actual Labor Cost to Date 57 Production Order Actual Labor Hours to Date 57 Production Order Actual Machine Hours to Date 57 Production Order Actual Material Cost to 57 Production Order Actual Material Cost to 57 Production Order | NAME NO: NAME NO: Academic Qualification 116 Employee Acknowledgement Code 26 Purchase Order Date 26 Purchase Order Activity Information 331 Statement of Work Activity Named 346 Activity Policy 79 335 12 364 Actual Completion Date 57 Production Order Actual Labor Cost to Date 57 Production Order Actual Labor Hours to Date 57 Production Order Actual Machine Hours to Date 57 Production Order Actual Machine Hours to Date 57 Production Order Actual Material Cost to Date 57 Production Order | NAME NO. NAME NAME NO. NAME NO. NAME NO. NAME NAME NO. NAME NAME NO. NAME NO. NAME NO. NAME NO. NAME NO. NAME NAME NAME NAME NAME NAME NAME NAME |

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|-------------------------------|-----|------------------------|------|-------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Allocation Impact | 331 | Statement of Work | | | 0 |
| | Annual Commitment Forecast | 346 | Activity Policy | | | 0 |
| | Assembly Class Name | 331 | Statement of Work | | | 0 |
| | BOM Item No | 68 | BOM Item | | | 0 |
| | | | | 130 | Engrn BOM Dwg Call | 1K |
| | | 1 | | 294 | Engrn BOM Part Lot Cal | 1K |
| | | 1 | | 295 | Engrn BOM Ser Part Call | 1 |
| | | | | 296 | Engrn BOM Spec Call | 1K |
| | Buyer Estimate | 370 | Material Plan | | | 0 |
| | Buyer Name | 25 | Buyer | | | 0 |
| | Buyer No | 25 | Buyer | | | ОК |
| | | | | 26 | Purch Order | 1 |
| | | | | 28 | Purch Order Change | 1 |
| | | | | 90 | Supplier Quote Req | 1 |
| | | | The second second | 196 | Buyer Assign | 1K |
| | Carrier Name | 106 | Approved Carrier | | | 0 |
| IODE: | TITLE: | | E CLASS/ENTITY CLASS I | ! | NUMBER: | |

| 110 | ATTRIBUTE CLASS | | SWILL ENTITY CEASS | | | USE | |
|-----|---|----------|------------------------------------|-----|---------------------------------|-----|--|
| NO. | NAME | NO. | NAME | NO. | RITING ENTITY CLASS NAME | COL | |
| | Carrier No | 106 | Approved Carrier | | | 0 | |
| | | | | 179 | Appvd Carrier/Purch Req Item | 1 | |
| | | | A | 180 | Appvd Part Carrier | 1 | |
| | | | | 193 | Assigned Carrier | 1 | |
| | | | and a fee and the | 275 | Assign Carrier/Del Carrier | 1 | |
| | Change Description | 331 | Statement of Work | | | 0 | |
| | Change No | 331 | Statement of Work | | | 0 | |
| | | | | 346 | Activity Policy | 1 | |
| | | | | 79 | Resource Plan | 1 | |
| | | | | 335 | Section Activity | 1 | |
| | | | | 12 | Released Engrn Dwg | 1 | |
| | Descript 1 | | | 364 | Method Use | 11 | |
| | Class Type | 414 | Drawing | | | 0 | |
| | Classification Code | 6 | Part | | | 0 | |
| | Configuration Baseline Approval Date | 381 | Approved Configuration Baseline | | | 0 | |
| DE: | TITLE: | TTDIDUTE | CLASS/ENTITY CLASS IND | | NUMBER: | | |

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|---|--------|---|------|----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Configuration Baseline No | 352 | Configuration Baseline | | | OK |
| | | | 1. 2. 1. 1. 2. 2. 3. 1. 2. 1. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | 381 | Appvd Config Basln | 1K |
| | | | 1 | 5 | End Item | 1 |
| | | | | 404 | Dwg Applic to Conf Basln | 1K |
| | Config Item Serial No | 367 | Configurated Item | | | OK |
| | Configuration Review Board Document No | 331 | Statement of Work | | | 0 |
| | Configurated Item Affected | 414 | Drawing | | | 0 |
| | Conform Cert No | 92 | Conform Cert | | | OK |
| | | | 111111111111111111111111111111111111111 | 213 | Ser Part Conform Cert | 1K |
| | | | | 215 | Part Lot Conform Cert | 1K |
| | | | | 249 | Cust Tool Conform Cert | 1K |
| | | | | 250 | Owned Tool Conform Cert | 1K |
| | | | | 264 | Cust Equip Conform Cert | 1K |
| | | | | 265 | Owned Equip Conform Cert | 1K |
| | | | | 267 | Del Conform Cert | 1K |
| | | | 91 | 329 | Cust Facility Conform Cert | 1K |
| NODE: | TITLE: | TRIBUT | E CLASS (ENTITY OF ASS. 1925 | _ | NUMBER: | 11 |
| | AT | IRIBUT | E CLASS/ENTITY CLASS IND | DEX | | |

8 September 19

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|------|--|------|------------------|------|---------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | | | | 330 | Owned Fac Conform Cert | 18 |
| | | | | 269 | Purch Part Conform Cert | 18 |
| | | | | 272 | Purch Part Spec Conform | 18 |
| | and the state of the state of | | | 273 | Purch Part Dwg Conform | 18 |
| | Contract Approval Date | 81 | Sales Contract | | | 0 |
| | Contract Date | 81 | Sales Contract | | 2 | 0 |
| | Contract Delivery Rate | 81 | Sales Contract | | | 0 |
| | Contract Item No | 114 | Contract Item | | | OF |
| | The state of the s | 1 | 18.28.22.88.2 | 5 | End Item | 1 |
| | | ll . | | 79 | Resource Plan | 1 |
| | | | | 88 | Mfg Request | 1 |
| | | | | 304 | Sales Ord Item/Contr Item | 18 |
| | | | | 352 | Config Basln | 1 |
| | | | | 353 | Milestone | 1 |
| | Contract Name | 81 | Sales Contract | | | 0 |
| | | | 1,100 | | | |
| DDE: | TITLE: | | | | NUMBER: | |

OWNER ENTITY CLASS

ATTRIBUTE CLASS

| ATTR | IBUTE CLASS | | R ENTITY CLASS | INHE | RITING ENTITY CLASS | U: |
|------|-------------|-------------|---------------------|------|----------------------------|----|
| NO. | NAME | NO. | NAME | NO. | NAME | ço |
| | | | | 304 | Sales Ord Item/Contr Item | |
| | | | | 352 | Config Basln | |
| | | | | 353 | Milestone | |
| | | | | 346 | Activity Policy | |
| | | | | 362 | Test Rqmt | |
| | | | | 118 | Engrn BOM | |
| | | | | 297 | Ser Part End Use | |
| - 1 | | | | 349 | Type-Version Ship | |
| | | | | 383 | End Item Method Occur | |
| | | | | 387 | End Item Rqmt For Part | |
| | | | | 389 | End Item Work Element | |
| | | | | 390 | End Item Ramt for Dwg | |
| | | | | 341 | End Item Rqmt for Tool | |
| | | | | 391 | Engrn Ord Appl to End Item | |
| | | | | 399 | Resource Need | |
| | | | | 335 | Section Activity | |
| DE: | TITLE: | ATTRIBUTE C | ASS/ENTITY CLASS IN | IDEN | NUMBER: | _ |

| | ATTRIBUTE CLASS | | NER ENTITY CLASS | | RITING ENTITY CLASS | USE |
|-------|---------------------------------|----------|------------------------|------|-------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 12 | Rel Engrn Dwg | 1 |
| | | | | 68 | Engrn BOM Item | 1K |
| | | | | 364 | Method Use | 1K |
| | * 1 | | | 130 | Engrn BOM Dwg Call | 1K |
| | 1 | | | 294 | Engrn BOM Part Lot Call | 1K |
| | 1 | | | 295 | Engrn BOM Ser Part Call | 1 |
| | | | | 296 | Engrn BOM Spec Callout | 1K |
| | Contract Project No | 348 | Project | | | ОК |
| | Contract Revision No | 84 | Contract Revision | | | OK |
| | Contract Rqmt Effective Date | 114 | Contract Item | | | 0 |
| | Contract Type | 81 | Sales Contract | | | 0 |
| | Cost Account Name | 4 | Cost Account | | | 0 |
| | Cost Account No | 4 | Cost Account | | | ОК |
| | | | | 23 | Purch Req Item | 1 |
| | | | | 27 | Purch Ord Item | 1 |
| | | | | 57 | Prod Order | 1 |
| NODE: | TITLE: | TTRIBLIT | E CLASS/ENTITY CLASS I | NDEX | NUMBER: | _11 |

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USI |
|------|---------------------------|-----|--------------------------|------|-------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | | | | 388 | Fab Lot Sub Acct | 1 |
| | Cost Element | 370 | Material Plan | | | 0 |
| | Cost Source | 370 | Material Plan | | | 0 |
| | Cost Summary | 370 | Material Plan | | | 0 |
| | Customer No | 1 | Customer | | | OF |
| | | | | 81 | Sales Contract | 1 |
| | | | | 243 | Customer Tool | 1 |
| | | | | 278 | Cust Equip Type | 114 |
| | | | | 286 | Rqmt/Cust Tool Type | 1 |
| | | | | 284 | Cust Tool Type | 114 |
| | | | | 297 | Serialized Part End Use | 11 |
| | | | | 259 | Cust Equip Inst | 1 |
| | | | | 280 | Ramt Cust Equip Type | 1 |
| | Customer Tool Crew-size | 243 | Customer Tool | | | 0 |
| | Customer Tool No | 47 | Operation Tool Callout | | | 0 |
| | Customer Tool Description | 243 | Customer Tool | | | 0 |
| DDE: | TITLE: | | E CLASS/ENTITY CLASS IND | | NUMBER: | |

| r | · |) |
|---|---|---|
| 1 | ı | |
| ۲ | | • |
| • | • | 1 |
| ľ | , | 1 |
| | | |

| | ATTRIBUTE CLASS | OWI | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|---------------------------|---------|------------------------|------|--------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Customer Tool Order No | 243 | Customer Tool | | | 0 |
| | Customer Tool Quantity | 243 | Customer Tool | | | 0 |
| | Cutting Spec ID | 378 | Cutting Spec | | | ОК |
| | | | | 392 | Cutting Spec Call | 1K |
| | Date Closed | 26 | Purchase Order | | | 0 |
| | Delivery Schedule Item No | 398 | Delivery Schedule Item | | | OK |
| | | | | 5 | End Item | 1 |
| | Deviation Waiver No | 109 | Deviation Waiver | | | OK |
| | Drawing Approval Date | 414 | Drawing | | | 0 |
| | Drawing Bill of Material | 414 | Drawing | | | 0 |
| | Drawing Name | 414 | Drawing | | | 0 |
| | Drawing Next Assembly | 414 | Drawing | | | 0 |
| | Drawing No | 414 | Drawing | 1 | | ОК |
| | | | | 6 | Part | 1 |
| | | | | 42 | Tool Drawing | 1K |
| | | | | 345 | Dwg Applic to Sales Cont | 1K |
| NODE: | TITLE | | | | INLIMBED. | |
| NODE: | TITLE: | TRIBUTE | CLASS/ENTITY CLASS IND | EX | NUMBER: | 11_ |

| | RIBUTE CLASS | | R ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-----|--------------|-----|---------------------|------|-----------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | | | | 119 | Engrn Chg Item | 1 |
| | | | | 123 | Engrn Dwg Chg | 10 |
| | | | | 130 | Engrn BOM Dwg Call | 11 |
| | | | | 134 | Ref Drawing | 11 |
| | | | | 181 | Part Drawing | 1 |
| | | | | 354 | Engrn Chg Request | 1 |
| | | | | 385 | Dwg Matl Callout | 11 |
| | | | | 390 | End Item Rqmt for Dwg | 11 |
| | | | | 393 | Chg Rqst Dwg Callout | 11 |
| | | | | 396 | Planning Parts List | 11 |
| | | | | 404 | Dwg App Conf to Basln | 11 |
| | | | | 303 | Tool Dwg Callout | 14 |
| | | | | 153 | Comp Part Dwg Callout | 14 |
| | | | | 182 | Dwg Use/Req Part | 14 |
| | | | | 189 | Purch Ord Dwg Call | 1k |
| | | | | 212 | Raw matl Dwg Call | 1 |
| DE: | TITLE: | | ASS/ENTITY CLASS IN | | NUMBER: | |

| 2 | |
|---|--|
| L | |
| 7 | |
| S | |

| | ATTRIBUTE CLASS | | | | INHERITING ENTITY CLASS | |
|------|-------------------------|-------------|------------------------|------|----------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | Y - Y | | | 224 | Proc Plan Part Dwg Call | 1K |
| | | | | 324 | Part Spec Rqmt | 1K |
| | 7) | | | 377 | Planning Parts List Item | 1K |
| | | | | 271 | Purch Part Dwg Non-Conform | 1K |
| | | | | 273 | Purch Part Dwg Conform | 1K |
| | | | | 12 | Rel Engrn Dwg | 1K |
| | Drawing Revision Letter | 414 | Drawing | | | 0 |
| | Earliest Start Date | 57 | Production Order | | | 0 |
| | Employee Name | 116 | Employee | | | 0 |
| | Employee No | 116 | Employee | | | ок |
| | | | | 22 | Purch Req | 1 |
| | | | | 24 | Purch Req Chg | 1 |
| | | | | 25 | Buyer | 1K |
| | | | | 26 | Purchase Order | 1 |
| | | | | 53 | Operator | 1K |
| | | | | 105 | Skill Cert | 1 |
| DDE: | TITLE: | T D I D I T | E CLASS/ENTITY CLASS I | NDEY | NUMBER: | |

| ١ | S |
|---|---|
| 1 | Ē |
| ۲ | - |
| | J |
| C | V |

| | ATTRIBUTE CLASS | | WNER ENTITY CLASS | INHE | RITING ENTITY CLASS | USI |
|-----|--|---------|-------------------------|------|------------------------|-----|
| 10. | NAME | NO. | NAME | NO. | NAME | COL |
| | | | | 170 | Purch Req Apprv Auth | 1ĸ |
| | | | | 183 | Purch Ord Apprv Auth | 18 |
| | | | | 214 | Inspector | 14 |
| | | | | 217 | Prod Ord Apprv Auth | 11 |
| | | | | 219 | Mfg Planner | 114 |
| | | | | 418 | Process Planner | 114 |
| | | 1 | | 171 | Purch Req Approval | 18 |
| | | 1 | | 194 | Purch Req Chg Approval | 14 |
| | | | | 191 | Purch Ord Approval | 114 |
| | | 1 | | 199 | Purch Ord Chg Approval | 18 |
| | | | | 218 | Prod Ord Approval | 14 |
| | Employee Sex | 116 | Employee | | | 0 |
| | Employee Skill Class | 116 | Employee | | | 0 |
| | End Item Description | 5 | End Item | | | 0 |
| | End Item Major Ass'y Schedule Delivery Date | 5 | End Item | | | 0 |
| | End Item Major Ass'y Schedule In-Work Date | 5 | End Item | | | 0 |
| E: | TITLE: | TTRIBUT | E CLASS/ENTITY CLASS IN | NDEY | NUMBER: | |

8 September 1

| | ATTRIBUTE CLASS | U | WNER ENTITY CLASS | INHI | ERITING ENTITY CLASS | U |
|-----|--------------------|----------|-------------------------|------|----------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | Ç |
| | End Item Serial No | 5 | End Item | | | 0 |
| | | | | 118 | Engrn BOM | 1 |
| | | 1 | | 297 | Ser Part End Use | 10 |
| | | 1 | | 341 | End Item Rqmt for Tool | 10 |
| | | | | 349 | Type-Version Ship | 10 |
| | | | | 383 | End Item Method Occur | -11 |
| | | 1 | | 387 | End Item Romt for Part | 1 |
| | | | | 389 | End Item Work Element | 1 |
| | | | | 390 | End Item Ramt for Dwg | 1 |
| | | | | 391 | Engrn Order Applic to E.I. | 1 |
| | | 1 | | 399 | Resource Need | 1 |
| | | | | 68 | Engrn BOM Item | 1 |
| | | 1 | | 130 | Engrn BOM Dwg Callout | 1 |
| | | | | 294 | Engrn BOM Part Lot Callout | 1 |
| | | | | 295 | Engrn BOM Ser Part Callout | 1 |
| | | | | 296 | Engrn BOM Spec Callout | 11 |
| DE: | TITLE: | ATTRIBUT | E CLASS/ENTITY CLASS II | | NUMBER: | _ |

-177

FTR1104100C

| | Engrn Change Item No | 119 | Engrn Change Item | | | OK |
|-------|------------------------|---------|----------------------------|-----|------------------------------------|----|
| | | | | 123 | Engrn Dwg Chg | 1K |
| | | 1 | | 126 | Engrn Spec Chg | 1K |
| | Engrn Change No | 14 | Engrn Change | | | OK |
| | | 1 | | 119 | Engrn Change Item | 1K |
| | , i di | 1 | | 126 | Engrn Spec Chg | 1K |
| | | | | 123 | Engrn Dwg Chg | 1K |
| 2_178 | Engrn Chg Proposal No | 332 | Engrn Chg Proposal | | | OK |
| 6 | | | | 358 | Eng Ord Use fo Eng Chg Proposal | 1K |
| | Engrn Change Req Appvl | 354 | Engineering Change Request | | | 0 |
| | Engrn Change Req Date | 354 | Engineering Change Request | | | 0 |
| | Engrn Change Req Desc | 354 | Engineering Change Request | | | 0 |
| | Engrn Change Req No | 354 | Engineering Change Request | | | OK |
| | | | | 359 | Engrn Ord/Eng Chg Req | 1K |
| | | | | 393 | Chg Reqst Dwg Call | 1K |
| NODE: | | TTDIDUT | | | NUMBER: | |

ATTRIBUTE CLASS/ENTITY CLASS INDEX

OWNER ENTITY CLASS

NAME

NO.

INHERITING ENTITY CLASS
NO. NAME

NUMBER:

NO.

FTR110410000U 8 September 1983

USE

CODE

NO.

ATTRIBUTE CLASS

NAME

| | ATTRIBUTE CLASS | OV | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|--|-----|----------------------------|------|-------------------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Engrn Change Req Orig | 354 | Engineering Change Request | | | 0 |
| | Engrn Order Appvl Date | 361 | Approved Engineering Order | | | 0 |
| | Engrn Order No | 333 | Engrn Order | | | ОК |
| | la de la companya de | | | 361 | Appvd Engrn Order | 1K |
| | , | | | 14 | Engrn Change | 1K |
| | | | | 415 | Process Plan | 1 |
| | | | | 69 | Engrn Release | 1K |
| | | | | 358 | Eng Ord Use For Eng Chg Proposal | 1K |
| | | | | 359 | Eng Ord Use For Eng Chg Request | 1K |
| | | | | 391 | Eng Ord Appl to End Item | 1K |
| | | | | 12 | Rel Engrn Dwg | 1K |
| | | | | 13 | Engrn Spec | 1 |
| | | | | 6 | Part | 1 |
| | | | | 42 | Tool Drawing | 1K |
| | | | | 345 | Dwg Appl to Sales Contract | 1K |
| IODE: | TITLE: | | E CLASS/ENTITY CLASS INDE | | NUMBER: | |

| | IBUTE CLASS | | R ENTITY CLASS | INHE | RITING ENTITY CLASS | U: |
|-----|-------------|-----|----------------------|------|--------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | co |
| | | | | 119 | Engrn Chg Item | |
| | | | | 123 | Engrn Dwg Change | 1 |
| | | | | 130 | Engrn BOM Dwg Call | 1 |
| | | | | 134 | Ref Drawing | 1 |
| | | | | 181 | Part Drawing |] |
| | | | | 354 | Engrn Chg Request | 1 |
| | | | | 385 | Dwg Matl Callout | 1 |
| | | | | 390 | End Item Rqmt for Dwg | |
| | | | | 393 | Chg Rqst Dwg Callout |]] |
| | | | | 396 | Planning Parts List | 1 |
| | | | | 404 | Dwg Appl to Config Basln | 1 |
| 1 | | | | 303 | Tool Dwg Callout | 1 |
| | | | | 212 | Raw Matl Dwg Callout | 1 |
| | | | | 224 | Proc Plan Part Dwg Call | 1 |
| | | | | 324 | Part Spec Rqmt | 1 |
| | | | | 377 | Planning Parts List Item | 1 |
| DE: | TITLE: | | LASS/ENTITY CLASS IN | | NUMBER: | |

8 September 1

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|------------------------|------|------------------------|------|--------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Equip Availability Std | 51 | Equipment | | | 0 |
| | Equipment Description | 51 | Equipment | | | OK |
| | | 1 | 1,000 | 98 | Equipment Callout | lK |
| | | - | | 161 | Equip Spec | 1K |
| | | 1 | | 237 | Equip Skill Ramt | lK |
| | | | | 240 | Station Equip Loc | lK |
| | | | | 278 | Cust Equip Type | 1K |
| | | | | 279 | Owned Equip Type | 1K |
| | 1 | | | 342 | Dept Equip Ramt | 1K |
| | | | | 251 | Equip Spec Callout | 1K |
| | | | | 257 | Cust Equip Ramt | 1 |
| | | | | 261 | Owned Equip Rqmt | 1 |
| | | | | 280 | Rqmt Cust Equip Type | l 1K |
| | | | | 282 | Req/Owned Equip Type | 1K |
| | | | | 264 | Cust Equip Conform Cert | 1 |
| h., | | | | 265 | Owned Equip Conform Cert | 1 |
| NODE: | TITLE: | | E CLASS/ENTITY CLASS I | | NUMBER: | |

| | | | | 276 | Cust Equip Station Assign | 1 | 1 |
|-------|------------------------|---------|---------------------------|-----|----------------------------|----|--------|
| | | 1 | | 277 | Owned Equip Station Assign | 1 | |
| | | | | 259 | Cust Equip Instance | 1 | |
| | A Long Value of the | 1 | | 260 | Owned Equip Instance | 1 | I |
| | Equipment Downtime Std | 51 | Equipment | | | 0 | |
| | Equipment Property No | 259 | Customer Equipment Inst | | | OK | |
| ., | | | | 257 | Cust Equip Rqmt | 1K | |
| 2-182 | | | | 264 | Cust Equip Conform Cert | 1 | l |
| 2 | 1 Nation 19 | | Charles Harris | 276 | Cust Equip Station Assign | 1K | |
| | Estimated Cost | 26 | Purchase Order | | | 0 | |
| | Estimated Tool Life | 45 | Tool Type | | | 0 | |
| | Estimated Unit Price | 23 | Purchase Request Item | | | 0 | |
| | Estimator | 331 | Statement of Work | | | 0 | |
| | Expected Acknow Date | 26 | Purchase Order | | | 0 | |
| | Expedite Date | 26 | Purchase Order | | | 0 | 0 |
| | External Priority | 57 | Production Order | | | 0 | Septe |
| NODE: | TITLE: | TRIBUTI | F CLASS/ENTITY CLASS INDE | | NUMBER: | | mber L |

ATTRIBUTE CLASS/ENTITY CLASS INDEX

OWNER ENTITY CLASS

NAME

NO.

INHERITING ENTITY CLASS

NAME

NO.

NO.

ATTRIBUTE CLASS

NAME

FTRILO41000

USE CODE

| يعا فالباد | ATTRIBUTE CLASS | | NER ENTITY CLASS | | RITING ENTITY CLASS | USE |
|------------|-----------------------|---------|-------------------------|------|---------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Fab Hours | 331 | Statement of Work | | | 0 |
| | Flow Span of Assembly | 335 | Section Activity | | | 0 |
| | Formal Planning Hours | 331 | Statement of Work | | | 0 |
| | Fuselage Sequence No | 414 | Drawing | | | 0 |
| | Generation Date | 396 | Planning Parts List | | | OK |
| | | | | 337 | Pl Parts List Item | 1 |
| | Go-Ahead By | 382 | Material Need | | | 0 |
| | Index No | 351 | Index | | | ОК |
| | | | | 6 | Part | 1 |
| | Inspection Code | 45 | Tool Type | | | 0 |
| | Inspector No | | Inspector | | 10 | ок |
| | And the section is | | | 92 | Conform Cert | 1 |
| | | Ì | | 266 | Del Rejection | 1 |
| | Installation Respon | 5 | End Item | | | 0 |
| | Instruction | 331 | Statement of Work | | | 0 |
| | Issue No | 331 | Statement of Work | | | 0 |
| | | | | | | |
| ODE: | TITLE: | TTRIBUT | E CLASS/ENTITY CLASS IN | IDEA | NUMBER: | |

| ١ | |) | |
|---|---|---|--|
| 1 | ĺ | | |
| ۲ | | • | |
| Ç | Ι |) | |
| 1 | _ | • | |

| 110 | ATTRIBUTE CLASS | | WNER ENTITY CLASS | INH | ERITING ENTITY CLASS | USE |
|-----|---|---------|-------------------------|------|-----------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | Item Description | 346 | Activity Policy | | | 0 |
| | Last Change Date of Purchase Requisition | 22 | Purchase Request | | | 0 |
| | Latest Start Date | 57 | Production Order | | | 0 |
| | Lead Time | 370 | Material Plan | | | 0 |
| | Length of Quotation | 370 | Material Plan | 11 1 | | 0 |
| | Lgth of Quote Validity | 370 | Material Plan | | | 0 |
| | Line Item Description | 370 | Material Plan | | | 0 |
| | Line No | 421 | Planned Mfg Oper | | | OK |
| | | | 1 1 1 1 | 386 | Pld Mfg Oper Matl Req | 1K |
| | 4 | | | 334 | Auth Oper | 1K |
| | | | | 383 | End Item Method Occur | 1K |
| | | | | 47 | Oper Tool Call | 1K |
| | | | | 98 | Equip Call | 1K |
| ı | | | | 63 | Operation Std | 1K |
| | | | | 244 | Cust Tool Call | 1K |
| | | | | 247 | Owned Tool Call | 1K |
| DE: | TITLE: | TRIBUTE | E CLASS/ENTITY CLASS IN | | NUMBER: | |

| | ATTRIBUTE CLASS | OW | | | INHERITING ENTITY CLASS | |
|-------|------------------------|-----|-------------------------|------|--------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 252 | Tool Spec Call | 1K |
| | | | | 303 | Tool Dwg Call | 1K |
| | | | | 286 | Rqmt for Cust Tool Type | 1K |
| | | | | 288 | Rqmt for Owned Tool Type | 1K |
| | | | | 251 | Equip Spec Callout | 1K |
| | | | | 257 | Cust Equip Ramt | 1K |
| | | | | 261 | Owned Equip Ramt | 1K |
| | | | | 280 | Ramt/Cust Equip Type | 1K |
| | | 1 | | 282 | Ramt/Owned Equip Type | 1K |
| | Line Position | 335 | Section Activity | | | 0 |
| | Low-Level Code | 6 | Part | | | 0 |
| | Machine Dimensions | 51 | Equipment | | | 0 |
| | Machine Hour Rate | 51 | Equipment | | | 0 |
| | Machine Instruction No | 320 | Machine Instruction | | | OK |
| | Machine Weight | 51 | Equipment | | | 0 |
| | Major Assembly Break | 335 | Section Activity | | | 0 |
| NODE: | TITLE: | | E CLASS/ENTITY CLASS II | IDEV | NUMBER: | |

| | ATTRIBUTE CLASS | | WNER ENTITY CLASS | INHE | RITING ENTITY CLASS | US |
|-----|---|---------|--------------------------|------|-----------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | ÇO |
| | Make/Buy Code | 6 | Part | | | C |
| | Mgmt Program Review Board Directive No | 331 | Statement of Work | | | 0 |
| | Manufacturing Planner No | 219 | Manufacturing Planner | | | C |
| | | | | 57 | Production Order | 1 |
| | Manufacture Request No | 88 | Manufacture Request | | | C |
| | | | | 57 | Production Order | 1 |
| | | | 5.50 | 93 | Part Lot | 1 |
| | Manufacturing Day | 553 | Milestone | | | C |
| | Mfg Process Name | 95 | Manufacturing Process | | | 0 |
| | | | | 162 | Process Spec | 1 |
| | Manufacturing Process No | 95 | Manufacturing Process | | | 0 |
| | | | | 162 | Mfg Process Spec | 1 |
| | | | | 255 | Part/Process Spec Use | 1 |
| | | | | 238 | Process Skill Rqmt | 1 |
| | | | | 242 | Station/process | 1 |
| | | | | 256 | Process Spec Callout | 1 |
| DE: | TITLE: | TDIDLIT | E CLASS/ENTITY CLASS INC | ! | NUMBER: | _II |

| 'n | ĭ | |
|----|---|---|
| ۱ | _ | |
| Ċ | C | 1 |
| • | J | ľ |

| ATTRIBUTE CLASS | | OWNER ENTITY CLASS | | INHERITING ENTITY CLASS | | USE |
|-----------------|--------------------------|--------------------|---------------------------|-------------------------|------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | ÇOD |
| | Master Change Record No | 360 | Master Change Record | | | OK |
| | | | | 333 | Engrn Order | 1 |
| | Material Allocation | 382 | Material Need | | | 0 |
| | Material Average Price | <i>5</i> 68 | Material | | | 0 |
| | Material Commodity Group | 368 | Material | 1 1 | | С |
| | Material Description | 368 | Material | | | 0 |
| | Material Issue No | 89 | Material Issue | | | OK |
| | Material Library Code | 368 | Material | | | 0 |
| | Material Quantity | 407 | Availability of Material | | | 9 |
| | Material Receipt No | 87 | Material Receipt | | | OK |
| | Material Spec | 368 | Material | | | OK |
| | | | | 382 | Material Need | 1 |
| | | | | 385 | Dwg Matl Call | 1K |
| | | | | 386 | Plnd Mfg Oper Matl Req | 1K |
| | | | | 397 | Part Rqmt for Matl | 1K |
| | | | | 411 | Prod Ord Matl Call | 1K |
| DDE: | TITLE: | | E CLASS/ENTITY CLASS INDI | | NUMBER: | |

| N | | |
|----|---|--|
| 'n | ĭ | |
| Ľ | _ | |
| 'n | n | |
| č | ñ | |

| ATTRIBUTE CLASS | | OWNER ENTITY CLASS INHERITING ENTIT | | RITING ENTITY CLASS | TY CLASS USE | |
|-----------------|----------------------|-------------------------------------|------------------------|---------------------|-------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Milestone Compl Date | 353 | Milestone | | | 0 |
| | Milestone Descr | 353 | Milestone | | | ОК |
| | | 1 | | 335 | Section Activity | 1 |
| | | | | 384 | Resched Milestone | 1K |
| | | | | 398 | Del Sched Item | lĸ |
| | | | | 399 | Resource Need | 1K |
| | | | | 5 | End Item | 1 |
| | | | | 382 | Material Need | 1K |
| | | | | 400 | Manpower Need | 1K |
| | | | | 401 | Tooling Need | 1K |
| | | | | 402 | Facilities Need | 1K |
| | | | | 322 | Q.A. Need | 1K |
| | | | | 403 | Equip Need | 1K |
| | | | | 79 | Resource Plan | 1K |
| | | | | 88 | Mfg Request | 1 |
| | | | | 370 | Material Plan | 1K |
| ODE: | TITLE: | | | | NUMBER: | |
| | A | TTRIBUT | E CLASS/ENTITY CLASS I | NDEX | | |

| ١ | - | 3 | ١ | |
|---|---|---|---|--|
| ١ | ı | | | |
| ۲ | - | | | |
| ĺ | Ì | |) | |
| ١ | 1 | |) | |
| | | 7 | | |

| | ATTRIBUTE CLASS | | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|------|------------------------|---------|-------------------------|------|-----------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | | | | 371 | Manpower Plan | 1K |
| | | | | 372 | Tooling Plan | 1K |
| | | | | 373 | Facilities Plan | 1K |
| | | | | 374 | Q.A. Plan | 1K |
| | 1 | | | 375 | Equip Plan | 1K |
| | Milestone In-Work Date | 353 | Milestone | | | 0 |
| | Model | 81 | Sales Contract | | | 0 |
| | Need Date | 353 | Milestone | | | 0 |
| | Normal Start Time | 116 | Employee | | | 0 |
| | Normal Stop Time | 116 | Employee | | | 0 |
| | Number of Ships | 114 | Contract Item | | | 0 |
| | N.C. Program No | 318 | N.C. Program | | | OK |
| | | | 2000 | 319 | N.C. Program Callout | 1K |
| | | | | 320 | Machine Instruction | 1K |
| | | | | 321 | N.C. Program Mach Use | 1K |
| | | | | | | |
| | | | | | | |
| ODE: | TITLE: | TTRIBUT | E CLASS/ENTITY CLASS IN | DEX. | NUMBER: | |

| | | ŀ |
|---|---|---|
| ŗ | | , |
| ď | | |
| 7 | r | ` |
| 2 | = | ′ |

| ATTRIBUTE CLASS | | OWNER ENTITY CLASS | | INHE | INHERITING ENTITY CLASS | |
|-----------------|----------------------|--------------------|---|------|--------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | Operator No | 53 | Operator | | | OK |
| | | | | 66 | Operator Station Assign | 1K |
| | | 1 | | 140 | Operator Mach Assign | 1K |
| | Order Discount Terms | 26 | Purchase Order | | | 0 |
| | Organization ID | 422 | Organization | | | OK |
| | | 1 | | 4 | Cost Account | 1 |
| | | | | 100 | Station | 1K |
| | | | | 56 | Machine | 1 |
| | | | | 66 | Operator Station Assgn | 1 |
| | | | | 421 | Planned Mfg Oper | 1 |
| | | | | 240 | Station Equip Loc | 1K |
| | | | | 276 | Cust Equip Sta Assign | 1 |
| | | | | 277 | Owned Equip Sta Assign | 1 |
| | | | | 242 | Station/Process | 1K |
| | | | | 291 | Station/Tool Location | 1K |
| | | | | 292 | Cust Tool Station Assign | 1 |
| DDE: | lari s | | *************************************** | | Taumas a | |
| DE: | TITLE: | ATTRIBUT | E CLASS/ENTITY CLASS I | NDEX | NUMBER: | |

| 1 | • | ٥ | |
|---|---|---|--|
| i | ı | ī | |
| ı | ٠ | _ | |
| • | V | 0 | |
| ı | ۰ | _ | |

| | ATTRIBUTE CLASS | | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|--------------------------|---------|-------------------------|------|----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 293 | Owned Tool Station Assign | 1 |
| | | | | 350 | Station Callout | 1 |
| | | | | 351 | Index | 1 |
| | | | | 116 | Employee | 1 |
| | | | | 342 | Dept Equip Rqmt | 1K |
| | | | | 354 | Engrn Change Request | 1 |
| | | | | 355 | Department Task | 1K |
| | | | | 413 | Facility spec | 1K |
| | | | | 329 | Cust Facility Conform Cert | 1 |
| | | | | 330 | Owned Facility Conf Cert | 1 |
| | | | | 423 | Component Organization | 1K |
| | Other Charges | 26 | Purchase Order | | | 0 |
| | Page No | 331 | Statement of Work | | | 0 |
| | Part Cost | 6 | Part | | | 0 |
| | Part Description | 6 | Part | | | 0 |
| | Part Lot Completion Date | 93 | Part Lot | | | 0 |
| NODE: | TITLE: | | | | NUMBER: | |
| | AT | TRIBUTI | E CLASS/ENTITY CLASS IN | IDEX | | |

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USI |
|------|-----------------------|--|------------------------|------|-------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | Part Lot In-Work Date | 93 | Part Lot | | | 0 |
| | Part Lot No | 93 | Part Lot | | | 0 |
| | | 1 |) | 211 | Raw Matl Lot Romt | 11 |
| | | | | 215 | Part Lot Conform Cert | 1 |
| | | | | 221 | Part Lot Assign | 1 |
| | | 1 | | 222 | Ser Part/Source Lot | 1 |
| | | 1 | | 229 | Part Lot Stock Loc | 10 |
| | | 1 | | 234 | Comp Part Lot Romt | 1 |
| | | | | 294 | Engrn BOM Part Lot Call | 11 |
| | | | | 388 | Fab Lot Sub Act | 10 |
| | | | | 405 | Part Shortage | 1 |
| | Part Lot Size | 93 | Part Lot | | | 0 |
| | Part Name | 6 | Part | | | 0 |
| | Part No | 6 | Part | | | OF |
| | | | | 349 | Type-Version Ship | 11 |
| | .0 | | | 5 | End Item | 18 |
| DDE: | TITLE: | <u> </u> | E CLASS/ENTITY CLASS I | ll | NUMBER: | |

| | TRIBUTE CLASS | | R ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|---------------|-----|---------------------|------|------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 57 | Prod Order | 1 |
| | | | | 68 | Eng BOM Item | 1 |
| | | | | 68 | Eng BOM Item | 1K |
| | | 1 1 | | 89 | Material Issue | 1 |
| | | 1 1 | | 90 | Supplier Quote Request | 1 |
| | | | | 91 | Supplier Quote | 1 |
| | | | | 93 | Part Lot | 1 |
| | | | | 74 | Proc Plan Matl Call | 1 |
| | | | | 88 | Mfg Request | 1 |
| | | i l | | 120 | Part Spec | 1K |
| | | | | 87 | Matl Receipt | 1 |
| | | | | 147 | Ser Part Inst | 1K |
| | | | | 177 | Appvd Part Source | lK |
| | | | | 180 | Appvd Part Carrier | 1K |
| | | | | 181 | Part Drawing | 1K |
| | | | | 188 | Ordered Part | 1 |
| NODE: | TITLE: | | LASS/ENTITY CLASS I | | NUMBER: | |

| | UTE CLASS | | ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|------|-----------|-------------|----------------------|-------|----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| 1,50 | | | | 175 | Requested Purch Part | 1K |
| | | | | 309 | Supplier Del Lot | 1K |
| | | 1 1 | | 271 | Purch Part Drg Non-Conform | 1K |
| | | | | 383 | End Item Meth Occur | 1K |
| | | | | 390 | End Item Ramt for Dwg | 1K |
| | | 1 | | 272 | Purch Part Spec Conform | 1K |
| | | | | 391 | Eng Order Appl to End Item | 1K |
| | | | | 300 | Image Part | 1K |
| | | | | 399 | Resource Need | 1 |
| | | | | 254 | Std Rtg Use | 1K |
| | | | | 299 | Component Part | 1K |
| | | | | 301 | Alternate Part | 1K |
| | | | | 273 | Purch Part Drawing Conf | 1K |
| | | | | 230 | Comp Part Callout | 1K |
| | | | | 255 | Part/Process Spec Use | 1K |
| | | | | 363 | Section | 1K |
| ODE: | TITLE: | ATTRIBUTE C | -ASS/ENTITY CLASS II | UDEV. | NUMBER: | |

| AT | TRIBUTE CLASS | OWNE | R ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|---------------|-------------|----------------------|------|------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 380 | Work Package | 1 |
| | | | | 227 | Stock Loc Use for Part | 1K |
| | | | | 367 | Configured Item | 1K |
| | | | | 387 | End Item Rqmt for Part | 1K |
| | | | | 318 | N.C. Program | 1K |
| | | | | 409 | Sched Part | 1K |
| | | | | 397 | Part Rqmt for Matl | 1K |
| | | | | 118 | Engrn BOM | 1K |
| | | | | 340 | Part Tool Rqmt | 1K |
| | | | | 415 | Process Plan | 1 |
| | | | | 157 | Comp Part Spec Callout | 1K |
| | | | | 178 | Spec Use/Reqst Part | 1K |
| | | | | 190 | Purch Ord Spec Callout | 1 |
| | | | | 389 | End Item Work Element | 1K |
| | | | | 213 | Ser Part Conform Cert | 1 |
| | | | | 215 | Part Lot Conform Cert | 1 |
| NODE: | TITLE: | ATTRIBUTE (| CLASS/ENTITY CLASS I | | NUMBER: | |

| NO. NAME NO. | NAME NO. 225 270 324 209 222 | Raw Matl Spec Callout Purch Part Spec Non-Conform Part Spec Rqmt Ser Raw Matl Rqmt | USE CODE 1K 1K 1K 1K |
|--------------|-------------------------------|---|-------------------------------------|
| | 270 324 209 | Purch Part Spec Non-Conform Part Spec Rqmt Ser Raw Matl Rqmt | lk lk |
| | 324 209 | Part Spec Rqmt Ser Raw Matl Rqmt | 1K |
| | 209 | Ser Raw Matl Romt | |
| | | | 1K |
| | 222 | 1.7 (270) (1.60) (200) (2.5) | |
| 1 1 | | Ser Part/Source Lot | 1K |
| | 233 | Ser Comp Part Rqmt | 1K |
| | 228 | Ser Part Stock Loc | 1K |
| | 295 | Engrn BOM Ser Part Call | 1K |
| | 297 | Ser Part End Use | 1K |
| | 335 | Section Activity | 1 |
| | 323 | Ser Sup Part Source Lot | 1K |
| | 182 | Dwg Use/Req Part | 1K |
| | 189 | Purch Ord Dwg Call | 1 |
| | 212 | Raw Matl Dwg Call | 1K |
| | 224 | Proc Plan Part Dwg call | 1K |
| | 294 | Eng BOM Part Lot Callout | 1K |
| IODE: TITLE: | /ENTITY CLASS INDEX | NUMBER: | |

2-196

OWNER ENTITY CLASS

INHERITING ENTITY CLASS

ATTRIBUTE CLASS

2-197

FTR110410000U 8 September 1983

USE

| 110 | ATTRIBUTE CLASS | | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USI |
|-----|---------------------------|---------|--------------------------|------|---------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | Part Unit of Measure | 6 | Part | | | 0 |
| | Planned Mfg Oper Des | 421 | Planned Mfg Operation | | | 0 |
| | Planned Mfg Oper Run Time | 421 | Planned Mfg Operation | | | 0 |
| | Planned Mfg Oper Seq No | 421 | Planned Mfg Operation | | | 0 |
| | Plnd Mfg Oper Set-up Time | 421 | Planned Mfg Operation | 1 | | 0 |
| | Planned Order Rel Date | 57 | Production Order | | | 0 |
| | Planned Queue Time | 51 | Equipment | | | 0 |
| | Plng Parts List Item No | 377 | Planning Parts List Item | | | O. |
| | Planning Type | 331 | Statement of Work | | | 0 |
| | Position Value | 353 | Milestone | | | 0 |
| | Prepared By | 331 | Statement of Work | | | 0 |
| | Pricing Estimte | 370 | Material Plan | | | 0 |
| 4 | Process Lead Time | 6 | Part | | | 0 |
| | Process Plan No | 415 | Process Plan | | | OK |
| | | | | 421 | Planned Mfg Oper | 11 |
| | | | | 220 | Std Rtg Callout | 14 |
| DE: | TITLE: | TRIBLIT | CLASS/ENTITY CLASS INDE | | NUMBER: | II |

| | ATTRIBUTE CLASS | OWNE | R ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|-----------------|-----------|-----------------------|------|-----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 224 | Process Plan Part Dwg Call | 1K |
| | | | | 420 | Proc Plan Use as Prod Order | 1K |
| | | | | 386 | Plnd Mfg Oper Matl Rqmt | 1K |
| | | | | 334 | Auth Oper | 1K |
| | . 1 | | | 383 | End Item Method Occur | 1K |
| | | | | 47 | Oper Tool Call | 1K |
| | | | | 98 | Equip Callout | 1K |
| | 14 | | | 63 | Oper Std | 1K |
| | | | | 230 | Comp Part Callout | 1K |
| | | | | 74 | Process Plan Matl Call | lK |
| | | | | 244 | Cust Tool Callout | 1K |
| | | | | 247 | Owned Tool Callout | 1K |
| | | | | 252 | Tool Spec Callout | 1K |
| | | | | 303 | Tool Dwg Callout | 1K |
| | | | | 286 | Rqmt for Cust Tool Type | 1K |
| | | | | 288 | Rqmt for Owned Tool Type | 1K |
| NODE: | TITLE: | ATTRIBUTE | CLASS/ENTITY CLASS II | NDEY | NUMBER: | |

2-199

| \ | 0 | |
|---|---|--|
| ı | | |
| - | ٥ | |
| | 5 | |
| | כ | |

| 110 | ATTRIBUTE CLASS | | WNER ENTITY CLASS | INHI | ERITING ENTITY CLASS | USE |
|-----|--------------------------|--------|-------------------------|------|-----------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | COD |
| | | | | 251 | Equip Spec Call | 1K |
| | | | | 257 | Cust Equip Ramt | 1ĸ |
| | | | | 261 | Owned Equip Ramt | 1K |
| | | i | | 280 | Rqmt/Cust Equip Type | 1K |
| | | | | 282 | Ramt/owned Equip Type | 1K |
| | | | | 209 | Ser Raw Matl Romt | 1K |
| | | | | 211 | Raw Matl Lot Romt | 1K |
| | | | 1, | 225 | Raw Matl Spec Call | 1K |
| | L | | 4 | 212 | Raw Matl Dwg Call | 1K |
| | Process Plan Reason Code | 415 | Process Plan | | | 0 |
| | Process Planner No | 418 | Process Planner | | | ОК |
| | | | | 415 | Process Plan | 1 |
| | Processing Allocation | 364 | Method Use | | | 0 |
| | Prod Control Board No | 331 | Statement of Work | | | 0 |
| | Production Order Descr | 57 | .Production Order | | | 0 |
| | | | | | | |
| DE: | TITLE: | | | | | |
| - | | TRIBUT | E CLASS/ENTITY CLASS IN | IDEX | NUMBER: | |

| - 1 | Production Order No | 57 | Production Order | | | OK |
|-------|---------------------------|---------|---------------------------|-----|---------------------------|----|
| | | | | 420 | Proc Plan Use as Prod Ord | 1K |
| | | | | 218 | Prod Order Approval | 1K |
| | | | | 405 | Part Shortage | 1 |
| | l A | | | 408 | Stop Order Application | 1K |
| | | | | 221 | Part Lot Assign | 1K |
| 11 | | | 1.5 | 223 | Contract Prod Order | 1K |
| 2 | | | | 411 | Prod Order Matl Call | 1K |
| 2-201 | | | | 412 | Part Shortage Recon | 1 |
| | | | | 334 | Auth Oper | 1K |
| 1 | | | | 407 | Avail of Matl | 1K |
| | Production Order Priority | 57 | Production Order | | 10.000 | 0 |
| | Production Order Quantity | 57 | Production Order | | | 0 |
| | Production Type | 331 | Statement of Work | | | 0 |
| | Program Name | 347 | Program | | | ОK |
| | | | | 4 | Cost Account | 1 |
| NODE: | TITLE: | TDIDIIT | E CLASS/ENTITY CLASS INDE | , | NUMBER: | |

OWNER ENTITY CLASS

NAME

NO.

INHERITING ENTITY CLASS
NO. NAME

NO.

ATTRIBUTE CLASS

NAME

NO.

FTR110410000U 8 September 1983

USE CODE

| NO. NAME | | OWNER ENTITY CLASS | | INHERITING ENTITY CLASS | | USE |
|---------------|-------------------------|--------------------|--|-------------------------|----------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | Ço |
| | | 1 | | 81 | Sales Contract | |
| | | | | 308 | WBS | |
| | | | | 338 | Sched Chg Rqst | : |
| | | | | 348 | Project | |
| | | N/ | 352 | Config Basln | | |
| | | | | 381 | Appv Config Basln | 1 |
| | | | | 5 | End Item | |
| | Leave and the | | Maria de la companya | 404 | Dwg Applic to Conf Basln | |
| | Property No | 260 | Owned Equip Inst | | | |
| | | | | 56 | Machine | 1 |
| | | | | 140 | Operator/Mach Assign | 1 |
| | 1.0 | | | 261 | Owned Equip Ramt | |
| | | | | 265 | Owned Equip Conform Cert | |
| | | | A. | 277 | Owned Equip Station Assign | |
| Purch Ord Act | | | Telling where | 321 | N.C. Pgm Mach Use | |
| | Purch Ord Activity Code | 26 | Purchase Order | | | C |
| DDE: | TITLE: | TRIBUT | E CLASS/ENTITY CLASS IN | | NUMBER: | |

| ١ | |) | |
|---|---|---|--|
| 1 | ĺ | | |
| ֡ | | ? | |
| į | | í | |
| | | • | |

| | ATTRIBUTE CLASS | OW | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|------|-----------------------|----------|---------------------------|------|----------------------------|-----|
| NO. | NAME | NO. | NAME | NO. | NAME | ÇQD |
| | Purch Order Change No | 28 | Purch Order Change | | | ОК |
| | | 1 | | 197 | Purch Ord Item Chg Effect | 1K |
| | | | | 199 | Purch Ord Chg Approval | 1K |
| | | | | 198 | Purch Ord Item Chg Trace | 1K |
| | Purchase Order Date | 26 | Purchase Order | | | 0 |
| | Purch Ord Del Ramt No | 315 | Purch Ord Item Del Rqmt | | | OK |
| | Purch Order Item No | 27 | Purch Order Item | | | OK |
| | | 1 | | 139 | Supplier Del Item | 1 |
| | | 1 | | 188 | Ordered Part | 1K |
| | | 1 | | 197 | Purch Ord Item Chg Effect | 1K |
| | | 1 | | 315 | Purch Ord Item Del Ramt | 1K |
| | | | | 317 | WBS Use for Purch Ord Item | 1K |
| | | | | 316 | Purch Ord Itm U/M | 1K |
| | | | | 187 | Req Purch Part Trace | 1K |
| | | | | 189 | Purch Ord Dwg Call | 1K |
| | | | | 190 | Purch Ord Spec Call | 18 |
| | | | | | NUMBER: | |
| ODE: | TITLE: | ATTRIBUT | TE CLASS/ENTITY CLASS IND | DEX | NOMBER. | |

| | ATTRIBUTE CLASS | - | NER ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-----|--|-----|-------------------------|------|----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 268 | Purch Part Rejection | 1 |
| | | | | 269 | Purch Part Conform Cert | 1 |
| | | | | 198 | Purch Ord Item Chg Trace | 1K |
| | | | 1) | 271 | Purch Part Dwg Non-Conform | 1K |
| | | | | 273 | Purch Part Dwg Conform | 1K |
| | | | | 270 | Purch Part Spec Non-Conf | 1K |
| | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | | 61 | 272 | Purch Part Spec Conform | 1K |
| | Purch Ord Last Chg Date | 26 | Purchase Order | | | 0 |
| | Purchase Order No | 26 | Purchase Order | | | 0K |
| | | | | 27 | Purch Ord Item | 1K |
| | | | | 28 | Purch Ord Change | 1 |
| | (1) | | | 186 | Assigned Supplier | 1K |
| | | | | 191 | Purch Ord Approval | lK |
| | | | | 192 | Contract Purch Order | lĸ |
| | | | | 193 | Assigned Carrier | 1K |
| | | | | 139 | Supplier Del Item | 1 |
| DE: | | | E CLASS/ENTITY CLASS II | | NUMBER: | |

2-204

| | TRIBUTE CLASS | | R ENTITY CLASS | INHE | RITING ENTITY CLASS | USE |
|-------|---------------|-------------|---------------------|-------|----------------------------|------|
| NO. | NAME | NO. | NAME | NO. | NAME | CODE |
| | | | | 188 | Ordered Part | 1K |
| | | | | 197 | Purch Ord Item Chg Effect | 1K |
| | | | | 315 | Purch Ord Item Del Ramt | 1K |
| | | | | 317 | WBS Use for Purch Ord Itm | 1K |
| | | | | 316 | Purch Ord Item U/M | 1K |
| | | | | 32 | Supplier Delivery | 1 |
| | | | | 275 | Assign Carrier/Del Carrier | 1 |
| | | | | 323 | Ser Sup Part Source Lot | 1 |
| | | | | 187 | Req Purch Part Trace | 1K |
| | | | | 189 | Purch Ord Dwg Call | 1K |
| 19 | | | | 190 | Purch Ord Spec Call | 1K |
| | | | | 268 | Purch Part Rejection | 1 |
| | | | | 269 | Purch Part Conform Cert | 1 |
| | | | | 198 | Purch Ord Item Chg Trace | 1K |
| | | | | 271 | Purch Part Dwg Non-Conf | 1K |
| | | | | 273 | Purch Part Dwg Conform | lK |
| IODE: | TITLE: | ATTRIBUTE C | LASS/ENTITY CLASS I | NDEV. | NUMBER: | |

2.8 Hierarchy Development

2.8.1 Introduction

The ICAM/MFG-1 Hierarchy Development effort was initiated by Downey & Small Associates, Inc. on September 20, 1982, under SofTech, Inc. Contract No. 1080-01020601, Purchase Order No. 9088. The purpose of this effort was to assist SofTech in its Integrated Computer Aided Manufacturing (ICAM) architecture development for the U.S. Air Force.

The ICAM/MFG-1 Hierarchy Development effort focused on improving the clairty and utility of the aerospace manufacturing data model, MFG-1. Task A1 examined the correlation between MFG-1 and the functional model, MFG-0, and is discussed in Section 2.8.2. Task A2 analyzed the MFG-1 entity classes to determine an appropriate hierarchy of entity class groups. The results are presented in Section 2.8.3. Task A3 assigned to FEO's all entity classes not previously shown on a FEO. Ten new FEO's were developed and are provided, along with the extended entity-FEO matrix, in Section 2.9

Section 2.9.4 contains a FEO hierarchy and index. They incorporate the new FEO I, developed in a separate modeling effort for quality assurance entities. Section 2.9.5 provides an alphabetical entity index with cross referencing to FEO's and MFG-0 activities.

It is important to note that this contract effort was not to review the completeness or accuracy of the entity classes, their relationships, their attribute classes, or the previous assignment to FEO's.

2.8.2 Entity-Activity Relationships

The relationship of the MFG-1 manufacturing entity classes to the MFG-0 manufacturing activities was examined using two approaches. The first was focused on correlating MFG-1 entity class names with MFG-0 arrow labels; the second sought general utilization and causal relations between entities and activities.

The first approach revealed very little correlation between entity and arrow names of the two models. The arrow labels were grouped hierarchially according to their fan-in and fan-out, and a matrix was developed to analyze their relation with the entity class names. Although there were some identical names, the majority of overlapping definitions were orthogonal in nature. Further, most pairs had no overlap at all. It was determined that the degree of correlation found by this approach would not lead to a useful tool for aiding the MFG-1 reader with an explicit link to MFG-9.

The second approach was more successful in yielding a tool to assist the MFG-1 reader with an intuitive correlation to MFG-Ø activities. Each entity was analyzed with respect to the MFG-Ø activities to determine which activities would conceivably use or produce that entity. The arrow labels surrounding each activity were considered in order to determine the context

of the activity and further assist the correlation decision. A matrix was then developed (Table 2.1) which shows the entity class names in numerical order, and two levels of activity names in hierarchial order. An "X" at any point on the matrix signifies that entities of the indicated type can be expected to be used as an input, control, or mechanism for the indicated activity, or that such entities are produced by that activity, or that they may be used internally between two subactivities of that activity. In the table, provision has been made for later assignment of additional entities from the new Quality Assurance model. These additional entity classes start at E424.

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A- | 1 A- | | | LAN FG | FC | | | EDU I IDGI | | | LA | - | TN | Λ 4 P R | RO | VI OU | DE RCE | | | ЗТА \ТЕ | IN RIA | 1 | | ODU ODU | | |
|--|-------------|------|---|---|-----------|-----|---|---|---------------|---|---|----|---|----|----------------------|----|----------|-----------|---|---|-------------|-----------|---|---|------------------|-----|--------|
| El Customer | | - | + | 1 | 2 X | 3 4 | 1 | 2 | 3 4 | 1 | F | 2 | 3 | 4 | 1 | 1 | 2 3 | 4 | H | 1 | 2 | 3 4 | 1 | 1 | 2 3 | 4 | 5 Y |
| E2 Sales Order E4 Cost Account E5 End Item E6 Part | x | | | | | | | | | × | | | | | | | | | | | | - | l | | × | | ^ |
| El2 Released Engineering Dwg El3 Engineering Specification El4 Engineering Change El9 Purchased Item Rework Ord E20 Purchased Item Scrap Ord | | | | x | | | | x | | | × | × | | | | | | | _ | x | | | | | × | 1 1 | |
| E22 Purchase Request E23 Purchase Request Item E24 Purchase Request Change E25 Buyer E26 Purchase Order | | | | | | | | | | | | | x | | | | x > | | | x | X X X | | | | | | |
| E27 Purchase Order Item E28 Purchase Order Change E30 Candidate Supplier E31 Qualified Supplier E32 Supplier Delivery | | | | | | | | | | | | x | | | | 1 | | | | × | - | | | | | | |
| E41 Tool Specification E42 Tool Drawing E45 Tool Type E47 Operation Tool Callout E51 Equipment | | | | | | | | | | | | | × | | | | × > | (| | | | | | | × × × × | 1 1 | |
| E53 Operator E56 Machine E57 Production Order E58 Standard Routing E63 Operation Standard | | | | | 1 | ! | | | | | | | X | | | | x | | | | | | | 1 | ×× | | |

 ∞

| MFG-D MFG-1 ACTIVITY ENTITY CLASS | A-1 | A-0 | NI PLA MFO | AN G | FOI | | SC | | DU I | | | PL | AN | | TN | | PRO | | I DE JRC | | | вт | ra i | N | | | ODU | | - |
|---|-----|-----|------------------|---------|-----|---|----|---|------|---|---|----|----|---|----|---|-----|---|-------------|---|---|---------------------------------------|------|---|---|---|-----|-----|---|
| | | | 1 : | 2 3 | 4 | 1 | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 | | 1 | 2 | 3 4 | 4 | 1 | 2 | 2 3 | 4 | 1 | 1 | 2 | 3 4 | 5 |
| E66 Operator Station Assignmt E68 Engineering BOM Item E69 Engineering Release E74 Process Plan Mat. Callout E79 Resource Plan | | | | × | X | | | X | | | × | x | x | x | | × | | | | | | | | | | | | | |
| E81 Sales Contract E84 Contract Revision E87 Material Receipt E88 Manufacture Regst. E89 Material Issue | X | | | | | × | | 6 | | | | | | | | | | | | | , | | | | | | × | | - |
| E90 Supplier Quotation Regst. E91 Supplier Quotation E92 Conformance Certification E93 Part Lot E95 Manufacturing Process | | | | | | | | | | | | | | x | | | | | | | | , | X | - | | x | × | | |
| E98 Equipment Callout E100 Station E105 Skill Certification E106 Approved Carrier E107 Supplier Invoice | | | | | | | | | | | | | | | | X | x | × | | | | | v | | | | | × | > |
| El09 Deviation Waiver Ell3 Supplier Return Ell4 Contract Item Ell6 Employee Ell8 Engrg.Bill of Material | x | | | | | | | x | | | | | | | | | | | | x | | | ; | × | | | | × ; | x |
| Ell9 Engineering Chg.Item El20 Part Specification El23 Engineering Drawing Chg El26 Engineering Spec.Chg. El30 Engr.BOM Dwg.Callout | | | X X | | | | | X | | | × | | x | x | | | | | | | > | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | | | | | | |

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | V =0 | PLAN FOR MFG | 8 | BUI | DULE DGET | | PF | AN RODUCTN 2 3 4 | 4 PROVIDE RESOURCE | OBTAIN MATERIAL | PR | ODU ODU 2 3 | CT | |
|---|-----|-------------|--------------|---|-----|--------------|---|----|------------------------|--------------------------|--------------------------|----|-------------------|----|---|
| E131 Routing Item E132 Sales Order Item E134 Reference Drawing E139 Supplier Delivery Item E140 Operator/Machine Assign | x | | | | | | • | | x X | | X | | | X | 3 |
| E147 Serialized Part Instanc E153 Component Part Dwg.Call E157 Component Part Spec.Cal E161 Equipment Specification E162 Mfgr.Process Spec. | | | x | | | | × | | x | x | | | | | |
| E170 P.R.Approval Authority E171 Purchase Request Approv E172 Contract Purchase Req E173 Requested Supplier E174 Candidate Sup./P.R.Item | | | | | | | | | | | x x x x x x x x | | | | |
| E175 Requested Purchased Part E176 Requested Carrier E177 Approved Part Source E178 Engrg.Spec./Requested P. E179 Apprvd Carrier/P.R.Item | | | | | | - | | | x x | | x x x | | | | × |
| E180 Approved Part Carrier E181 Part Drawing E182 Engrg.Dwg./Requested P. E183 P.O.Approval Authority E186 Assigned Supplier | | | | | | | | | x x | | x x x | | | | X |
| E187 Req.Purchase Part Trace. E188 Ordered Part E189 Purchase Order Dwg.Call. E190 Purchase Order Spec.Call E191 Purchase Order Approval | | | | | | | | | | | X | | | | |

FTR110410000U 8 September 1983

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | λ-(| | ME | G | FO | R | - | SCI 6 E | BUD | ULF GE1 | | PI | | UC | TN | | PRO | 501 | UR | CF | | | AIN | 7 | | ODU ODU | | - | |
|---|-----|-----|---|----|---|-----|-----|----|------------|-----|------------|---|----|---|----|----|---|-----|-----|----|----|---|-----|-----|---|-----|------------|-----|-----|---|
| | | | L | 1 | 2 | 3 4 | | | 1 2 | ? 3 | 4 | | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 4 | . : | 5 |
| E192 Contract Purchase Order E193 Assigned Carrier E194 P.R.Change Approval E195 P.R.Item Chg.Effect. E196 Buyer Assignment | | | | | | | | | | | | | | | | | | | | | | × | XXX | | | | | | | × |
| E197 P.O.Item Chg.Effect. E198 P.O.Item Chg.Trace. E199 P.O.Chg.Approval E209 Serialized Raw Mat.Regm E211 Raw Material Lot Regmt. | | | | | | | , | \ | | | | | | | × | | 1 | | | | | | XXX | | | | | | | |
| E212 Raw Material Dwg.Callou E213 Ser.Part Conform.Cert. E214 Inspector E215 Part Lot Conform.Cert. E217 Prod.Ord.Approval Auth. | t | | | | | × | | | | | | * | | | | | | | | | | | | × | | x | | x | | |
| E218 Production Order Approv E219 Manufacturing Planner E220 Standard Routing Callou E221 Part Lot Assignment E222 Ser.Part Source Lot | | | | | | x | | | | X | | X | | | x | X | | | | | | | | | | X | | | | |
| E223 Contract Production Ord E224 Proc.Plan Part Dwg.Call E225 Raw Material Spec.Call. E226 Stock Location E227 Stock Location/Part | | | | | | - | > | × | | | | | | | | | | | | | | | | | ۶ | XXX | X X | X | | |
| E228 Ser.Part Stock Location E229 Part Lot Stock Location E230 Component Part Callout E233 Ser.Component Parts Req E234 Component Part Lot Reqm | | | | | | | >>> | XX | | | | | | | x | | | | | | | | | | | | X | | | |

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | V-1 | λ-((| PL. MF | G | | | SCI & I | BUI | DUL DGE | F: | P | LA RO | | CTN | | PRO RES | SOU | IDE JRC | 1: | M | BT | AII ER | IAI | PR | ODU ODU 2 | JCI | - |
|---|-----|------|-----------|---|---|---|------------|-----|------------|----|---|----------|--------|-----|---|------------|-----|---------------------------------------|----|---|----|---------------------------------|-----|----|-----------------|-----|----|
| E236 Employee Skill E237 Equipment Skill Reqmt. E238 Process Skill Require. E240 Station Equip.Location E242 Station/Process E243 Customer Tool E244 Customer Tool Callout E246 Company Tool Callout E247 Company Tool Callout E249 Cust.Tool Conform.Cert. E250 Company Tool Conform.C. E251 Equipment Spec.Callout E252 Tool Spec.Callout E254 Standard Routing Use E255 Part Process Spec.Use E256 Process Spec.Callout E257 Customer Equipment Reqmt E259 Customer Equipment Instance E260 Owned Equipment Reqmt. | | | <u>x</u> | x | 3 | 4 | | 2 | 3 4 | | 1 | 2 |)) | | × | X | x | X X X X X X X X X X X X X X X X X X X | | | | 3 | 4 | 1 | 2 | 3 4 | 15 |
| E264 Cust.Equip.Conform.Cert. E265 Owned Equip.Conform.Cert E266 Delivery Rejection E267 Delivery Conformance C. E268 Purchased Part Reject. E269 Purchased Part Conf.Cert E270 P.P.Spec.Non-conform. E271 P.P.Dwg.Non-conform. E272 P.P.Spec.Conform. E273 P.P.Drawing Conform. | | | | | | | | | | | | |) | | | | X | | | | | X X X X X X X | | | | | |

FTR110410000U 8 September 1983

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | A -0 | \l PLAN FOR MFG | | A3 PLAN PRODUCTN | A4 PROVIDE RESOURCE | A5 OBTAIN MATERIAL | A6 PRODUCE PRODUCT |
|---|-----|-------------|-----------------------|---------|------------------------|---------------------------|--------------------------|--------------------------|
| | | | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 ,2 3 4 | 1 2 3 4 | 1 2 3 4 5 |
| E274 Delivering Carrier E275 Asgnd.Carrier/Deliv.C. E276 Customer Equip.Statn.A. E277 Owned Equip.Station Asg. E278 Customer Equipment Type | | | | | | x x x | X X | |
| E279 Owned Equip.Type E280 Req.for Cust.Equip.Type E282 Req.for Owned Equip.Type E284 Customer Tool Type E285 Company Tool Type | | | | | | x x x | | |
| E286 Req.for Cust.Tool Type E288 Req.for Company Tool Type E290 Tool Skill Requirement E291 Station/Tool Location E292 Cust.Tool Station Asgn. | | | | | X | x x x | | |
| E293 Company Tool Station Asg E294 Engr.BOM Part Lot Call. E295 Engr.BOM Ser.Part Call. E296 Engr.BOM Spec.Callout E297 Serialized Part End Use | | | | | X X X X | i x | | |
| E298 Orig.Supp.Quotation Req. E299 Component Part E300 Image Part E301 Alternate Part E302 Reference Specification | | | | | X X X X | | X | x |
| E303 Tool Drawing Callout E304 Sales Order Item/Ctr.I. E308 Work Breakdown Structur. E309 Supplier Delivery Lot E311 WBS Use for P.R.Item | x. | | x x | x x | | x x x | , x, | x |

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | A- | -0 | | l PLA MFG | | FOF | | | | EDU JDG | | | LA | | TN | - | RO | | DE | | | BT | AII ER | N I A I | | | OD OD | | - |
|--|-----|-------------|----|---|-----------------|---|-----|----|---|---|------------|---|---|----|---|----|---|-----|---|-----|----|---|-------|-----------|------------|---|---|----------|-------------|-------|
| | | L | | | 1 2 | 3 | 4 | 1. | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | 1 2 | 2 | 3 4 |]. | 1 | 2 | 3 | 4 | 1 | 1 | 2 | 3 4 | 4 5 |
| E312 WBS Item E313 P.R.Item Unit of Measur E314 P.R.Item Delivery Reqmt. E315 P.O.Item Delivery Reqmt. E316 P.O.Item Unit of Measur | | | | | | X | | | Х | - | X | | | - | | | | | | | | × | > | | | | X | | | - 1 - |
| E317 WBS Use for P.O.Item E318 Numerical Control Progra E319 N.C.Program Callout E320 Machine Instruction E321 N.C.Pgm.Machine Use | | | | | - | | | | | - | | | | | x | | | | | | | × | - - | - | | | | | X X X | |
| E322 Quality Assurance Need E323 Ser.Supp.Part Source Lot E324 Part Spec.Requirement E325 Supp.Part Lot Stock Loc. E326 Employee Training | | | - | | | | × | | | - | | | | × | X | | X | | | - | | | | | | | X | × | | |
| E327 Non-serialized Tool Type E328 Perish.Non-ser.Tool Type E329 Cust.Facil.Conform.Cert. E330 Owned Facil.Conform.Cert E331 Statement of Work | | | | X | | - | | | × | - | | | | - | | | | × | - | X | | | | - | | | | - | | |
| E332 Engrg.Change Proposal E333 Engineering Order E334 Authorized Operation E335 Section Activity E336 Manufacturing Proj.Plan | | x x x | | | | , | (| | | | | | X | | | | | | | 5 | | | | | | | | | | |
| E338 Schedule Change Request E340 Part Tool Requirement E341 End Item Reqmt.for Tool E342 Organization Equip.Reqmt E344 WBS Item Tool Reqmt. | | | | | x | | X | | | | | X | | | | | | | x | | | | | | | | | x | | |

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | N =0 | | PLAI MFG | | | 8 | SCI E | IED BUD | GET | i | PL | DDU | JCT | N | RE | so | | CE | OB MA | TA TE | RI. | ΑI | PRO PRO | DU DU | СТ | |
|--|-------------|-------------|---|-------------|---|-------------|---|----------|------------|-----|---|-----|-----|-----|---|----|----|---|----|----------|----------|-----|----|------------|----------|----|---|
| | - | _ | • | 1 2 | 3 | 4 | 4 | | 2 3 | 4 | 4 | L . | 2 3 | 3 4 | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 2 | 3 | 4 | 5 |
| E345 Dwg.Applic.to Sales Ctr E346 Activity Policy E347 Program E348 Project E349 Type-version Ship | X X X | | х | | | | | | | | | | | | | | | | | | | | | | | | |
| E350 Station Callout E351 Index E352 Configuration Baseline E353 Milestone E354 Engineering Change Req. | × | | | | × | | | , | ĸ | | | | x > | × | ĺ | | | | | | | | | + | X | | |
| E355 Organization Task E358 Engrg.Order Use for ECP E359 Engrg.Order Use for ECR E360 Master Change Record E361 Approved Engineering O | X X X | X | | | | | X | | | | | | | | - | | | | | | | | | | | | |
| E362 Test Requirement E363 Section E364 Method Use E365 Schedule Change Author E366 Type-version Ship Call | x | | | x x | | X | , | | | | | | | | | | | | | | | | | | | X | |
| E367 Configurated Item E368 Material E370 Material Plan E371 Manpower Plan E372 Tooling Plan | | x | | | | X X | | | | | | | | | X | | | | | . 1 | X | × : | X | | | | |
| E373 Facilities Plan E374 Quality Control Plan E375 Equipment Plan E377 Planning Parts List I E378 Cutting Specification | | | x | | | X X X | | | | | | | | + | × | | | | | + | | | | x | x | | |

FTR110410000U 8 September 1983

| MFG ENT | MFG-Ø -1 ACTIVITY ITY CLASS | A-1 | A- 0 | | PL PL | | | R | 8 | CH | UDC | JLE ET | P | LA RO | | CTN | I | PRO | VI SOU 2 3 | RCI | M | ATE | IN RIA | 1. | PF | ROD | UC | Т |
|--|---|-----|-------------|---|----------|---|--------|---|---|--------|-----|-----------|---|----------|---|-----|---|-----|------------------|-----|---|-----|-----------|----|----|-----|-------------|----------|
| E380 E381 E382 E383 E384 E385 E386 E387 | Visual Aid Work Package Approved Config.Baseline Material Need End Item Meth.Occurrence Rescheduled Milestone Drawing Material Callout Planned Mfg.Opn.Mat.Req. End Item Req.for Part | x | | • | × | - | × | ~ | | X | - | | | | × | | • | | 2 3 | 4 | × | x | 3 4 | | × | | 1 | 4 5 X |
| E389 E390 E391 E392 | Fabrication Lot Sub Acct End Item Work Element End Item Reg.for Dwg. E.O.Applic.to End Item Cutting Spec.Callout Change Request Dwg.Call. | | x | | | | | | 3 | × | x | | - | × | × | | | | | | × | | | - | | 1 1 | ×× | |
| E396 E397 E398 E399 | Visual Aid Callout Planning Parts List Part Requirement for Mat Delivery Schedule Item Resource Need | | | | | | × | × | | x | - | | | | x | | | | | X | X | | | | X | × | X X X | |
| E401 E402 E403 E404 | Manpower Need Tooling Need Facilities Need Equipment Need Dwg.Applic.to Config.B Part Shortage Stop Order | | | | x | | | | | | | _ | | | × | | | × | × | 1 | | | | | X | X | ^ | |
| E408 | Availability of Material Stop Order Application Scheduled Part | | | | | | i : | | | x x | | | | | | | | | | | | | | | X | | | |

FTR110410000U 8 September 1983

| MFG-Ø MFG-1 ACTIVITY ENTITY CLASS | A-1 | A-0 | PLAN I | | & | CHE! BUI | GET | | A3 PLAN PRODUCT | 'n | A4 PROV RESO | URCE | 5 OBTAIN MATERIA | 1 | | DUCE DUCT |
|---|-----|-----|--------|---|---|-------------|-----|---|-----------------------|----|--------------------|------|------------------------|---|-----|--------------|
| E411 Production Ord.Mat.Call. E412 Part Shortage Reconcil. E413 Facility Specification E414 Drawing E415 Process Plan E416 Routing Header E417 Routing Item/Std.Routing | | + | X X | 4 | 1 | 2 3 | | × | X X X | | 1 2 | 3 4 | 2 3 4 | | 1 2 | 3 4 |
| E420 Process Plan/Prod.Ord. E421 Planned Manufacturing O E422 Organization E423 Component Organization E424 First Article Evaluation E425 Inspector Evaluation E426 Major Non-Conformance | | ××× | | | | | | | X X X | | | X | | | × | × |
| 427 Mat.Rev.Bd.Disposition 428 Minor Non-Conformation 429 Non-Conformation Item 430 Standard Repair Callout 431 Quality Assurance Unit | | + | | - | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

2.8.3 Entity Class Hierarchy

The entity classes of MFG-1 were analyzed to determine alternative viewpoints for grouping in a hierarchial fashion. The first viewpoint was based upon properties of the entities represented; the second was based on the MFG-Ø partitioning.

The second view was selected and the entities grouped according to their relationship to the manufacturing activities. The criteria for membership in a particular entity class group (ECG) associated with a specific MFG-Ø activity is the correlation criteria used in Section 1. Thus, entity classes are grouped and said to be associated with a given activity if the entities they represent are used implicitly or explicitly in an input, control, or mechanism of that activity, or if they are produced by that activity, or if they are used internally between two or more sub-activities. Groups containing large numbers of entity classes have been analyzed in greater detail and assigned to smaller groups, associated with third level activities. In many cases, entity classes were associated broadly with several activities, some even at the A-1 and A-2 levels of MFG-Ø.

The entity class group (ECG) hierarchy is shown in Figure 3.1, and its population with entity classes is presented in Table 3.1.

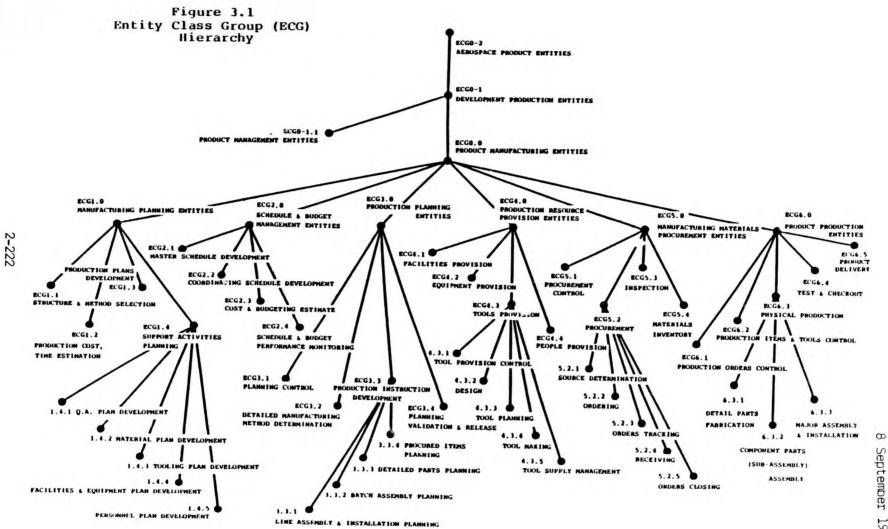


TABLE 3.1

ENTITY CLASS GROUP (ECG)

HIERARCHY

ECG0-2 AEROSPACE PRODUCT ENTITIES

Activity Policy, E346
Program, E347
Project, E348
Type-version Ship, E349
Type-version Ship Callout, E366

ECG0-1 DEVELOPMENT PRODUCTION ENTITIES

Approved Configuration Baseline, E381
Configuration Baseline, E352
Contract Item, E114
Contract Revision, E84
Engineering Order Use for Engineering Change Proposal, E358
Engineering Order Use for Engineering Change Request, E359
Master Change Record, E360
Milestone, E353
Program, E347
Project, E348
Type-version Ship Callout, E366

ECG0-1.1 PRODUCT MANAGEMENT ENTITIES

Sales Contract, E81
Sales Order, E2
Sales Order Item, E132
Sales Order Item/Contract Item, E304

ECGO. 0 PRODUCT MANUFACTURING ENTITIES

Approved Engineering Order, E361 Change Request Drawing Callout, E393 Component Organization, E423 Configurated Item, E367 Engineering Order, E333 Manufacturing Project Plan, E336 Organization, E422 Section Activity, E335

ECG1.0 MANUFACTURING PLANNING ENTITIES

Drawing Applicability to Sales Contract, E345 Planning Parts List Item, E377 Statement of Work, E331

ECG1.1 STRUCTURE & METHOD SELECTION ENTITIES

Drawing, E414
Drawing Applicability to Configuration Baseline, E404
Engineering Change, E14
Engineering Change Item, E119
Engineering Drawing Change, E123
Engineering Specification Change, E126
Method Use, E364
Released Engineering Drawing, E12
Section, E363
Station/Process, E242
Visual Aid, E379
Work Breakdown Structure Item Tool Requirement, E344

ECG1.2 PRODUCTION COST, TIME ESTIMATION ENTITIES

Customer, El Equipment Skill Requirement, E237 Facility Specification, E413

ECG1.3 PRODUCTION PLANS DEVELOPMENT ENTITIES

Authorized Operation, E334
Engineering Release, E69
Index, E351
Resource Flan, E79
Serialized Part Instance, E147
Serialized Part Source Lot, E222
Visual Aid, E379
Work Breakdown Structure, E308
Work Breakdown Structure Item, E312

ECG1.4 SUPPORT ACTIVITIES PLANNING ENTITIES

ECG1.4.1 Q.A. PLAN DEVELOPMENT ENTITIES

Quality Assurance Need, E322 Quality Control Plan, E374 Test Requirement, E362

ECG1.4.2 MATERIAL PLAN DEVELOPMENT ENTITIES

Cutting Specification, E378
Drawing Material Callout, E385
Engineering Bill of Material Drawing Callout, E130
Material Need, E382
Material Plan, E370
Part Requirement for Material, E397
Process Plan Material Callout, E74
Raw Material Drawing Callout, E212
Visual Aid, E379
Work Breakdown Structure Use for Purchase Request Item, E311

ECG1.4.3 TOOLING PLAN DEVELOPMENT ENTITIES

Cutting Specification, E378 Part Tool Requirement, E340 Tooling Plan, E372 Visual Aid, E379

ECG1.4.4 FACILITIES & EQUIPMENT PLAN DEVELOPMENT ENTITIES

Equipment Plan, E375 Facilities Plan, E373

ECG1.4.5 PERSONNEL PLAN DEVELOPMENT ENTITIES

Employee Training, E326 Manpower Plan, E371

ECG2.0 SCHEDULE & BUDGET MANAGEMENT ENTITIES

Component Part Lot Requirement, E234
Manufacture Request, E88
Organization Task, E355
Planning Parts List, E396
Raw Material Specification Callout, E225
Serialized Component Parts Requirement, E233
Serialized Raw Material Requirement, E209

ECG2.1 MASTER SCHEDULE DEVELOPMENT ENTITIES

End Item Work Element, E389 Schedule Change Authorization, E365 Statement of Work, E331 Work Breakdown Structure, E308 Work Breakdown Structure Item, E312

ECG2.2 COORDINATING SCHEDULE DEVELOPMENT ENTITIES

Availability of Material, E407
Delivery Schedule Item, E398
End Item Requirement for Drawing, E390
Engineering Bill of Material, E118
Engineering Bill of Material Drawing Callout, E130
Engineering Bill of Material Item, E68
Engineering Change, E14
Engineering Change Item, E119
Engineering Specification Change, E126
Material Need, E382
Milestone, E353
Part Lot Assignment, E221
Rescheduled Milestone, E384
Scheduled Part, E409

ECG2.3 COST & BUDGETING ESTIMATE ENTITIES

Fabrication Lot Sub Account, E388 Work Breakdown Structure, E308 Work Breakdown Structure Item, E312

ECG2.4 SCHEDULE & BUDGET PERFORMANCE MONITORING ENTITIES

Cost Account, E4 Schedule Change Request, E338

ECG3.0 PRODUCTION PLANNING ENTITIES

Drawing, E414
Engineering Bill of Material Item, E68
Engineering Change, E14
Engineering Change Proposal, E332
Engineering Change Request, E354
Engineering Drawing Change, E123
Engineering Drawing Change, E123
Engineering Specification Change, E126
Manufacturing Planner, E219
Manufacturing Process Specification, E162
Process Specification Callout, E256
Released Engineering Drawing, E12

ECG3.1 PLANNING CONTROL ENTITIES

Engineering Release, E69

ECG3.2 DETAILED MANUFACTURING METHOD DETERMINATION ENTITIES

Change Request Drawing Callout, E393
Component Part, E299
End Item Requirement for Part, E387
Engineering Change Request, E354
Engineering Release, E69
Engineering Specification, E13
Engineering Specification Used for Requested Part, E178
Part Drawing, E181
Part Specification, E120
Part Specification Requirement, E324
Process Plan, E415
Process Planner, E418
Purchase Order Item, E27
Reference Drawing, E134
Serialized Part End Use, E297

ECG3.3 PRODUCTION INSTRUCTION DEVELOPMENT ENTITIES

Change Request Drawing Callout, E393 Component Part Drawing Callout, E153 Component Part Specification Callout, E157 Engineering Bill of Material Part Lot Callout, E294 Engineering Bill of Material Serialized Part Callout, E295
Engineering Bill of Material Specification Callout, E296
Engineering Change Request, E354
Engineering Release, E69
Image Part, E300
Manufacturing Process, E95
Part Drawing, E181
Part Specification, E120
Part Specification Requirement, E324
Reference Specification, E302
Tool Specification, E41
Tool Type, E45

ECG3.3.1 LINE ASSEMBLY & INSTALLATION PLANNING ENTITIES

Customer Equipment Instance, E259 Customer Equipment Requirement, E257 Owned Equipment Instance, E260 Process Plan Use as Production Order, E420

ECG3.3.2 BATCH ASSEMBLY PLANNING ENTITIES

Company Tool Station Assignment, E293
Customer Equipment Instance, E259
Customer Equipment Requirement, E257
Customer Tool Station Assignment, E292
Operation Standard, E63
Owned Equipment Instance, E260
Process Plan Use as Production Order, E420
Routing Header, E416
Routing Item/Standard Routing, E417
Standard Routing, E58
Standard Routing Callout, E220
Standard Routing Use, E254
Station/Tool Location, E291
Visual Aid, E379
Visual Aid Callout, E395

ECG3.3.3 DETAILED PARTS PLANNING ENTITIES

Alternate Part, E301
Company Tool Station Assignment, E293
Component Part Callout, E230
Customer Equipment Instance, E259
Customer Equipment Requirement, E257
Customer Tool Station Assignment, E292
Cutting Specification Callout, E392
End Item Requirement for Drawing, E390
Engineering Specification Used for Requested Part, E178
Equipment Need, E403
Numerical Control Program, E318
Operation Standard, E63
Owned Equipment Instance, E260
Owned Equipment Requirement, E261

Part Requirement for Material, E397 Part/Process Specification Use, E255 Planned Manufacturing Operation, E421 Planned Manufacturing Operation Material Requirement, E386 Process Plan Material Callout, E74 Process Plan Use as Production Order, E420 Production Order Material Callout, E411 Raw Material Lot Requirement, E211 Routing Header, E416 Routing Item, E131 Routing Item/Standard Routing, E417 Standard Routing, E58 Standard Routing Callout, E220 Standard Routing Use, E254 Station/Tool Location, E291 Tooling Need, E401 Visual Aid, E379 Visual Aid Callout, E395

ECG3.3.4 PROCURED ITEMS PLANNING ENTITIES

Purchase Request Change, E24

ECG3.4 PLANNING VALIDATION & RELEASE ENTITIES

Production Order Approval, E218

ECG4.0 PRODUCTION RESOURCE PROVISION ENTITIES

Employee Skill, E236
Employee Training, E326
Equipment Plan, E375
Facilities Plan, E373
Manpower Plan, E371
Operator Station Assignment, E66
Process Skill Requirement, E238
Skill Certification, E105
Tool Skill Requirement, E290
Tooling Plan, E372

ECG4.1 FACILITIES PROVISION ENTITIES

Customer Equipment Station Assignment, E276
Customer Facility Conformance Certification, E329
Facilities Need, E402
Owned Equipment Station Assignment, E277
Owned Facility Conformance Certification, E330
Purchase Request, E22
Purchase Request Item, E23
Requirement for Customer Equipment Type, E280
Requirement for Owned Equipment Type, E282
Station, E100
Station Equipment Location, E240
Work Breakdown Structure Use for Purchase Request Item, E311

ECG4.2 EQUIPMENT PROVISION ENTITIES

Customer Equipment Conformance Certification, E264
Customer Equipment Type, E278
Equipment, E51
Equipment Callout, E98
Equipment Need, E403
Equipment Specification, E161
Equipment Specification Callout, E251
Machine, E56
Organization Equipment Requirement, E342
Owned Equipment Conformance Certification, E265
Owned Equipment Type, E279
Purchase Request, E22
Purchase Request Item, E23
Work Breakdown Structure Use for Purchase Request Item, E311

ECG4.3 TOOLS PROVISION ENTITIES

Company Tool, E246
Company Tool Callout, E247
Company Tool Type, E285
Customer Tool, E243
Customer Tool Callout, E244
Customer Tool Type, E284
Non-serialized Tool Type, E327
Perishable Non-serialized Tool Type, E328

ECG4.3.1 TOOL PROVISION CONTROL ENTITIES

Operation Tool Callout, E47
Purchase Request, E22
Requirement for Company Tool Type, E288
Requirement for Customer Tool Type, E286
Tool Specification Callout, E252
Tooling Need, E401
Work Breakdown Structure Use for Purchase Request Item, E311

ECG4.3.2 DESIGN ENTITIES

Operation Tool Callout, E47
Requirement for Company Tool Type, E288
Requirement for Customer Tool Type, E286
Tool Drawing, E42
Tool Drawing Callout, E303
Tool Specification, E41
Tooling Need, E401

ECG4.3.3 TOOL PLANNING ENTITIES

Process Plan, E415
Process Plan Use as Production Order, E420
Process Planner, E418
Purchase Request Item, E23

Tool Drawing, E42
Tool Specification, E41
Work Breakdown Structure Use for Purchase Request Item, E311

ECG4.3.4 TOOL MAKING ENTITIES

Company Tool Conformance Certification, E250 Customer Tool Conformance Certification, E249 Tool Drawing, E42 Tool Specification, E41

ECG4.3.5 TOOL SUPPLY MANAGEMENT ENTITIES

Company Tool Conformance Certification, E250 Company Tool Station Assignment, E293 Customer Tool Conformance Certification, E249 Customer Tool Station Assignment, E292 Station/Tool Location, E291

ECG4.4 PEOPLE PROVISION ENTITIES

Employee, El16 Manpower Need, E400

G5.0 MANUFACTURING MATERIALS PROCUREMENT ENTITIES

ECG5.1 PROCUREMENT CONTROL ENTITIES

Buyer Assignment, E196 Drawing Material Callout, E385 Engineering Bill of Material Drawing Callout, El30 Engineering Change, E14 Engineering Change Item, E119 Engineering Order Applicability to End Item, E391 Engineering Specification Change, El26 Material Issue, E89 Material Need, E382 Material Plan, E370 Part Requirement for Material, E397 Purchase Order Change, E28 Purchase Order Item, E27 Purchase Request Approval Authority, E170 Purchase Request Approval, E171 Purchase Request Change, E24 Purchase Request Item Delivery Requirement, E314 Purchase Request Item Unit of Measure, E313 Requested Purchase Part Traceability, E187 Work Breakdown Structure Use for Purchase Order Item, E317

ECG5.2 PROCUREMENT ENTITIES

Purchase Request Approval, E171 Purchase Request Approval Authority, E170 Requested Purchased Part, E175

ECG5.2.1 SOURCE DETERMINATION ENTITIES

Approved Part Source, E177
Assigned Supplier, E186
Candidate Supplier, E30
Candidate Supplier Use for Purchase Request Item, E174
Contract Purchase Request, E172
Drawing Material Callout, E385
Material Plan, E370
Purchase Request, E22
Purchase Request Change Approval, E194
Purchase Request Item, E23
Purchase Request Item Change Effectivity, E195
Purchase Request Item Delivery Requirement, E314
Requested Supplier, E173

ECG5.2.2 ORDERING ENTITIES

Approved Carrier Use for Purchase Request Item, E179 Approved Part Source, E177 Assigned Supplier, E186 Buyer, E25 Buyer Assignment, E196 Candidate Supplier Use for Purchase Request Item, E174 Contract Purchase Order, E192 Engineering Drawing Use for Requested Part, E182 Ordered Part, E188 Originating Supplier Quotation Request, E298 Purchase Order, E26 Purchase Order Approval, E191 Purchase Order Approval Authority, E183 Purchase Order Change, E28 Purchase Order Change Approval, E199 Purchase Order Drawing Callout, E189 Purchase Order Item, E27 Purchase Order Item Change Effectivity, E197 Purchase Order Item Change Traceability, E198 Purchase Order Item Delivery Requirement, E315 Purchase Order Item Unit of Measure, E316 Purchase Order Specification Callout, E190 Qualified Supplier, E31 Requested Supplier, E173 Supplier Quotation, E91 Supplier Quotation Request, E90

ECG5.2.3 ORDERS TRACKING ENTITIES

Assigned Carrier Used as Delivering Carrier, E275 Buyer, E25 Buyer Assignment, E196 Delivering Carrier, E274 Purchase Order Item Change Traceability, E198

ECG5.2.4 RECEIVING ENTITIES

Assigned Carrier Used as Delivering Carrier, E275
Delivering Carrier, E274
Material, E368
Ordered Part, E188
Supplier Delivery, E32
Supplier Delivery Item, E139
Supplier Delivery Lot, E309

ECG5.2.5 ORDERS CLOSING ENTITIES

Buyer, E25
Buyer Assignment, E196
Purchase Order Item Change Traceability, E198
Supplier Invoice, E107

ECG5.3 INSPECTION ENTITIES

Delivery Conformance Certification, E267
Delivery Rejection, E266
Inspector, E214
Material, E368
Part Lot Conformance Certification, E215
Purchased Part Conformance Certification, E269
Purchased Part Drawing Conformance, E273
Purchased Part Drawing Non-conformance, E271
Purchased Part Rejection, E268
Purchased Part Specification Conformance, E272
Purchased Part Specification Non-conformance, E270
Supplier Return, E113

ECG5.4 MATERIALS INVENTORY MANAGEMENT ENTITIES

Material, E368

ECG6.0 PRODUCT PRODUCTION ENTITIES

ECG6.1 PRODUCTION ORDERS CONTROL ENTITIES

Alternate Part, E301
Contract Production Order, E223
Cutting Specification, E378
Manpower Need, E400
Part Lot, E93
Process Plan Part Drawing Callout, E224
Process Plan Use as Production Order, E420
Production Order, E57
Production Order Approval, E218
Production Order Approval Authority, E217
Resource Need, E399
Serialized Part Conformance Certification, E213
Serialized Part Source Lot, E222

Stop Order, E406 Stop Order Application, E408 Supplier Part Lot Stock Location, E325 Visual Aid Callout, E395 Work Breakdown Structure Item, E312 Work Package, E380

ECG6.2 PRODUCTION ITEMS & TOOLS CONTROL ENTITIES

Conformance Certification, E92 End Item Requirement for Tool, E341 Equipment, E51 Machine, E56 Material Receipt, E87 Part Lot Stock Location, E229 Part Requirement for Material, E397 Part Shortage, E405 Part Shortage Reconciliation, E412 Serialized Part Stock Location, E228 Serialized Supplier Part Source Lot, E323 Stock Location, E226 Stock Location Use for Part, E227 Supplier Delivery Lot, E309 Supplier Part Lot Stock Location, E325 Tool Drawing, E42 Tool Type, E45 Work Package, E380

ECG6.3 PHYSICAL PRODUCTION ENTITIES

Deviation Waiver, E109
Employee, E116
Equipment, E51
Inspector, E214
Machine, E56
Manpower Need, E400
Operator, E53
Operator/Machine Assignment, E140
Part Requirement for Material, E397
Purchased Item Rework Order, E19
Purchased Item Scrap Order, E20
Station, E100
Visual Aid Callout, E395

ECG6.3.1 DETAIL PARTS FABRICATION ENTITIES

Cutting Specification Callout, E392
Machine Instruction, E320
Numerical Control Program Callout, E319
Numerical Control Program Machine Use, E321
Quality Control Plan, E374
Station Callout, E350
Work Package, E380

ECG6.3.2 COMPONENT PARTS (SUB-ASSEMBLY) ASSEMBLY ENTITIES

Operation Tool Callout, E47 Quality Control Plan, E374 Station Callout, E350 Work Package, E380

ECG6.3.3 MAJOR ASSEMBLY & INSTALLATION ENTITIES

Contract Production Order, E223
Delivery Schedule Item, E398
End Item, E5
End Item Method Occurrence, E383
Engineering Order Applicability to End Item, E391
Part, E6
Process Plan Use as Production Order, E420

ECG6.4 TEST & CHECKOUT ENTITIES

Equipment, E51 Machine, E56 Supplier Return, E113 Test Requirement, E362 Work Package, E380

ECG6.5 PRODUCT DELIVERY ENTITIES

Approved Carrier, E106 Approved Part Carrier, E180 Assigned Carrier, E193 Customer, E1 Requested Carrier, E176

2.9 Entity Class FEO's

2.9.1 Entity Class FEO Development

The ECG hierarchy developed and presented in the previous section was examined in conjunction with the MFG-1 entity class relations to determine the feasibility of developing ECG relationship diagrams. It was decided that while it would be possible to develop abstract relationships for ECG's, it would not be practical within the available resources. Therefore, the MFG-1 FEO work was extended.

All entity classes not appearing on the FEO's presented at the June 1982 Industry Review were analyzed for assignment to FEO's. Interrelationships among these entity classes and with entities already appearing on FEO's were considered in making assignments.

The analysis work led to the development of ten new FEO's. The new FEO's overlap one another and the previous FEO's in order to provide cohesive pictures of their respective topic areas. An entity was placed on a particular FEO if (1) it was closely associated with the central focus of the FEO, or if (2) its relationship with another entity (not previously appearing on a FEO) would not otherwise appear on a FEO.

There is a major exception to this criteria: FEO "S", "End Item/Part," does not include all entity classes closely associated with E5 and E6. It only includes those whose relationships

with E5 or E6 would not appear on another FEO. Due to the large number of entity classes related to E5 and E6, the exception was needed to ensure the FEO would not be overloaded.

The new FEO's are defined below and shown in Section 2.9.2. Section 2.9.3 provides an extension of the entity-FEO matrix. Also a FEO hierarchy has been developed and is presented in Section 2.9.4.

FEO J Purchase Request - The entity classes (EC's) which provide information which is used to generate the purchase request document as seen by the purchasing representative.

FEO K Purchase Order - The EC's which provide information used in the generation of the PO by the Purchasing agent.

FEO L Supplier - Those EC's related to the identification, location and functions of the supplier as seen by the purchasing company.

FEO M Carrier - Those EC's related to the identification, location, and function of the carrier, including performance as seen by the purchasing company
FEO N Delivery Conformance - Those EC's related to the item identification, control, location, description, and function, as used by the receiver.

FEO O Ordered Parts - The EC's which are related to parts on order which identify, control, assure quality, etc. as used by the purchasing agent.

FEO P Inventory - The EC's related to the functional activity of stocking inventory as used by the inventory control system

FEO Q Material Plan - The EC's related specifically to the material required to be formed into parts and products as viewed by the material planner

FEO R Resource Plan - The EC's related to resources (people, facilities, equipment, tools, materials, and funds) as viewed by the production planner

FEO S End Item/Part - The EC's which are related to parts/end items as viewed by the product designer, with the exception described previously.

Section 2.9.2

ENTITY CLASS FEO DIAGRAMS

| USED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: | |
|----------|-----------------------------|-------|-------------|--------|------|----------|--|
| | PROJECT: | REV: | DRAFT | | | | |
| | | | RECOMMENDE | | | | |
| | NOTES: 1 2 3 4 5 6 7 8 9 10 | | PUBLICATION | | | | |

THE FOLLOWING FEO'S DEPICT VARIOUS VIEWS OF SUBSETS OF THE TOTAL MODEL TO ASSIST THE READER IN GAINING A BROADER PERSPECTIVE OF HOW THE FUNCTIONS OR TOPICS ARE COVERED BY THE MODEL. VALIDATION OF THESE FEO'S WILL HELP TO ASSURE THAT THE MODEL IS COMPLETE AND ACCURATE.

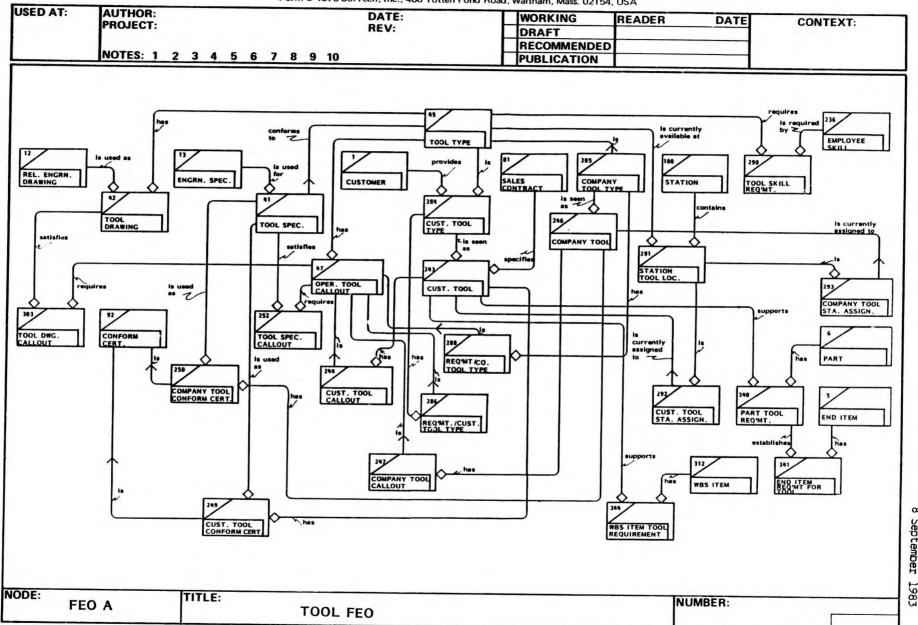
2-24

September 19

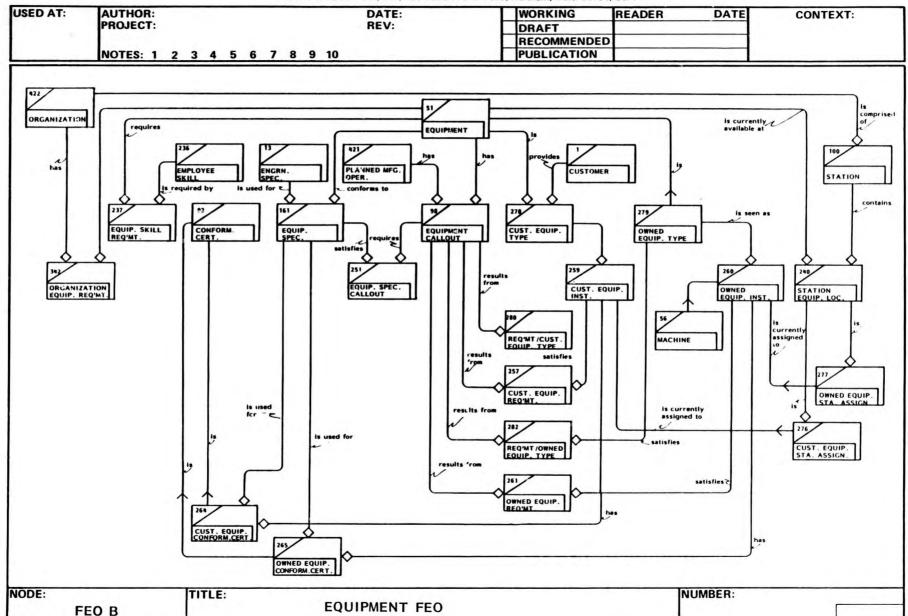
NODE: TITLE: ENTITY CLASS FEO DIAGRAMS NUMBER: 145

SADT DIAGRAM FORM ST098 9/75

Form © 1975 SofTech, Inc., 460 Totten Pond Road, Waltham, Mass. 02154, USA

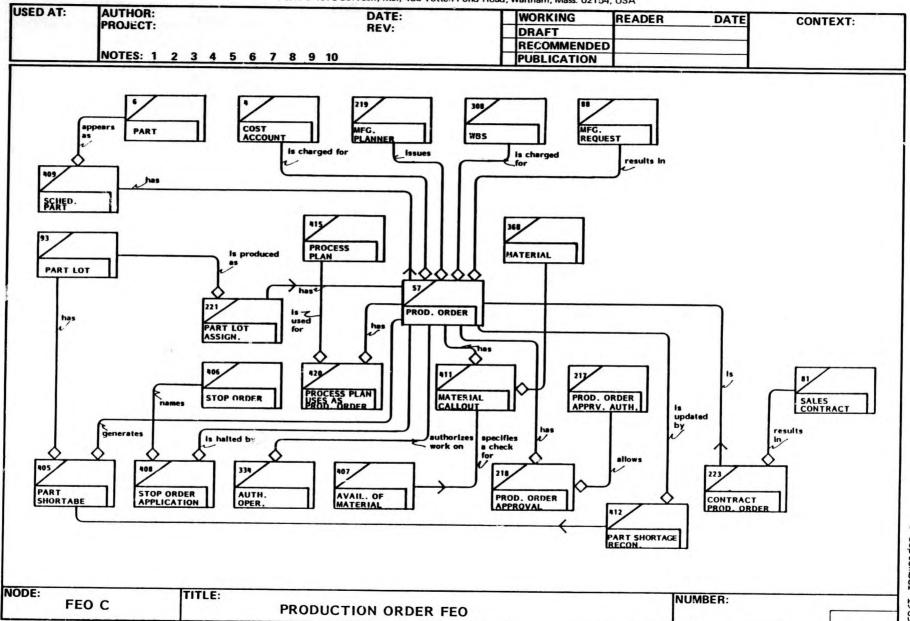


2-242



SADT DIAGRAM FORM ST098 9/75

Form © 1975 SofTech, Inc., 460 Totten Pond Road, Waltham, Mass. 02154, USA



-244

| JSED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING READE DRAFT RECOMMENDED | R DATE | CONTEXT: |
|--|---|---|--|----------------------------|--|
| PART DRAWING Is used as 212 RAW MAT**. DWG, CALLOUT | PART Ives C manufacture Is described 399 WORK PACKAGE Is basis for T PART In used as Is used as PROCESS PLAN PART ONC. CALLOUT PART INST. PART INST. SERIALIZED PART INST. SERIALIZED PART INST. SERIALIZED PART INST. PART AND MAT'L. COT REO'MT. RAW MAT'L. SPEC. | PROCESS PLANNER develops authorize APPVD. ENGR. ORDER develops authorize APPVD. ENGR. ORDER process PLAN As a specifier specifier PROCESS PLAN PROCESS PLAN As a specifier STD. ROUTING CALLOUT PART SPEC. Is used as | PRODUCTION ORDER MATERIAL Satisfies Calls authorize work on authorize work on AUTH. OPER 243 CUST. TOOL | PLANNED MFG. ORDER for has | END ITEM is manufactured — using has END ITEM METH. OCCUR. 63 OPERATION STANDARD ALLOUT ALLOUT ALLOUT 246 CO. TOOL |
| ODE: | TITLE: | PROCESS PLAN FEO | | NUMBER: | |

2-245

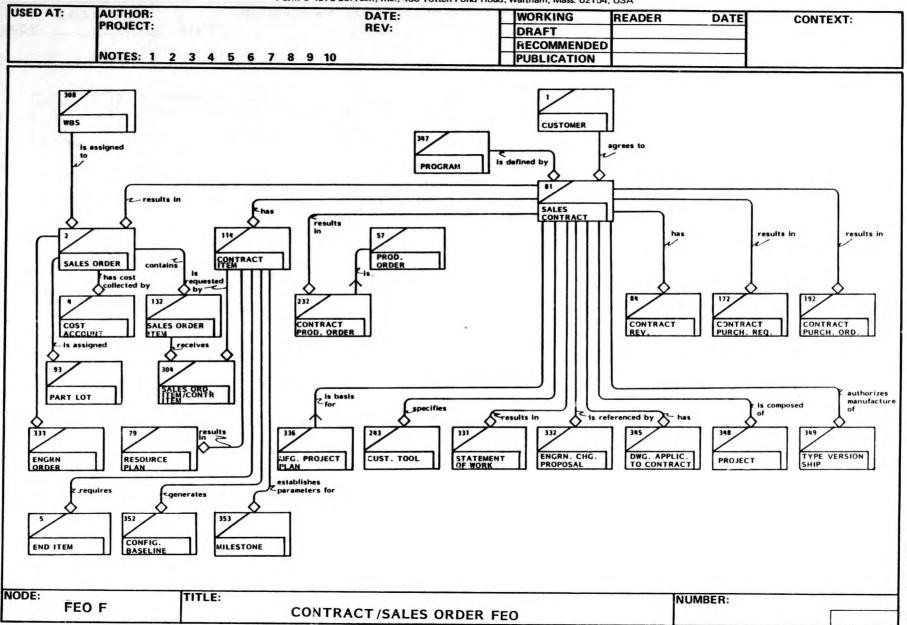
SADT DIAGRAM FORM ST098 9/75

Form © 1975 SofTech, Inc., 460 Totten Pond Road, Waltham, Mass 02154 USA

| | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
|---------|--|--|---|-------------------------------|--------|----------|
| | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | RECOMMENDED PUBLICATION | | | |
| PAR als | TESS STD. ROUTING STD. ROUTI | TING C. VISUAL AID Is specified by references SECTION ACTIVITY requires Is employed (by Is emplo | Is used in SPEC. Is MFG. PROCESSPEC. ART /PROCESS SPEC. ALLOUT TO PROMISE SPEC. ALLOUT TO PROCESS SPEC. ALLOUT TO | PROCESS PROCESS SKILL REQ MT. | | STATION |
| DE: | O E | | | lau | IMBER: | |

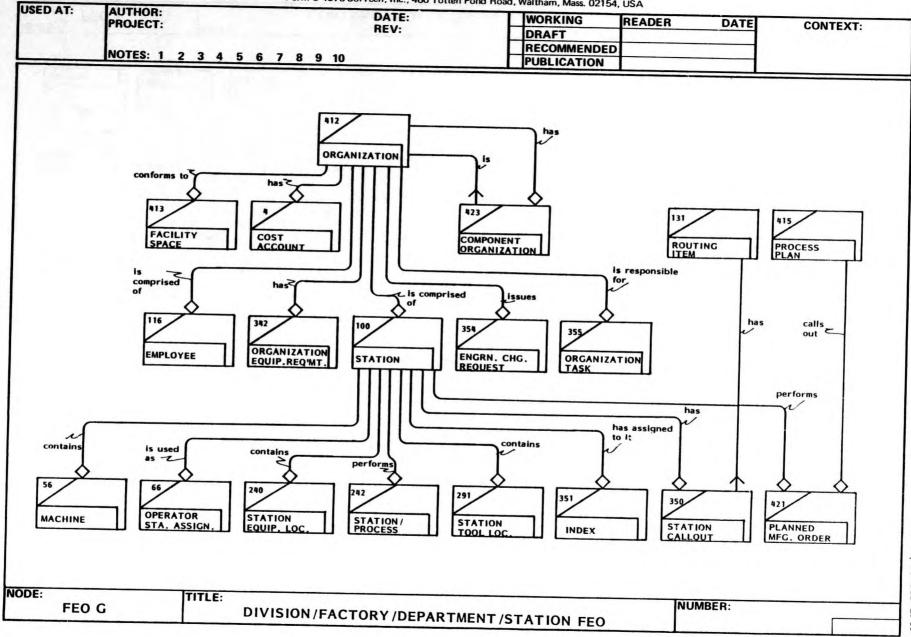
FTR110410000U d September 1983

2-246

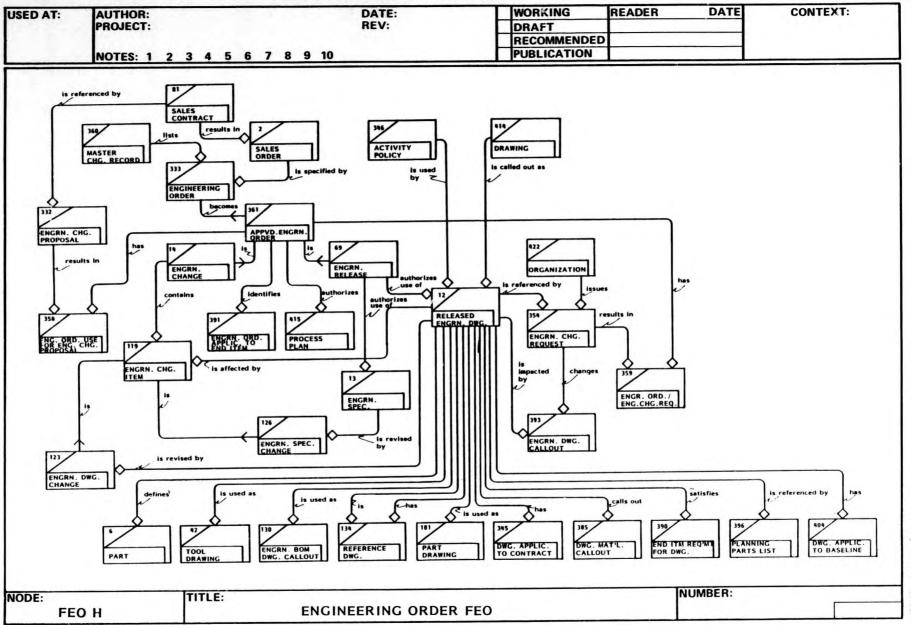


SADT DIAGRAM FORM ST098 9/75

Form © 1975 SofTech, Inc., 460 Totten Pond Road, Waltham, Mass. 02154, USA



8 September 198:



2-249/2-250

WBS/P.R. ITEM

P.R.ITEM UNIT OF MEASURE

P.R. ITEM DELIVERY REQUIREMENT

PURCHASE REQUEST

114

has

has

AUTHOR Downey & Small Assoc.

REQUESTED CARRIER

is

requires

196

BUYER ASS I GHMENT

179

TITLE:

APPRVD.

P.R. IIIM

PROJECT: ICAM/MFG-1 Hierarchy

DATE: 12/10/82

REV:

WORKING

RECOMMENDED

DRAFT

READER

P.R. CHANGE APPROVAL

results

198

P.O. ITEM CHANGE

TRACE .

DATE

allows

197

NUMBER

results

in

P.O.ITEM CHANGE EFFECT.

PURCHASE REQUEST APPROVAL

FIG. 4.1

CONTEXT:

.

172

CONTRACT PURCHASE

REQUEST

ST252

USED AT

OUOTATION REQUEST

NODE:

171

REQUESTED SUPPLIER

FEO J

178

MGRG. SPLO



œ

PURCHASE ORDER

\$1252

NODE

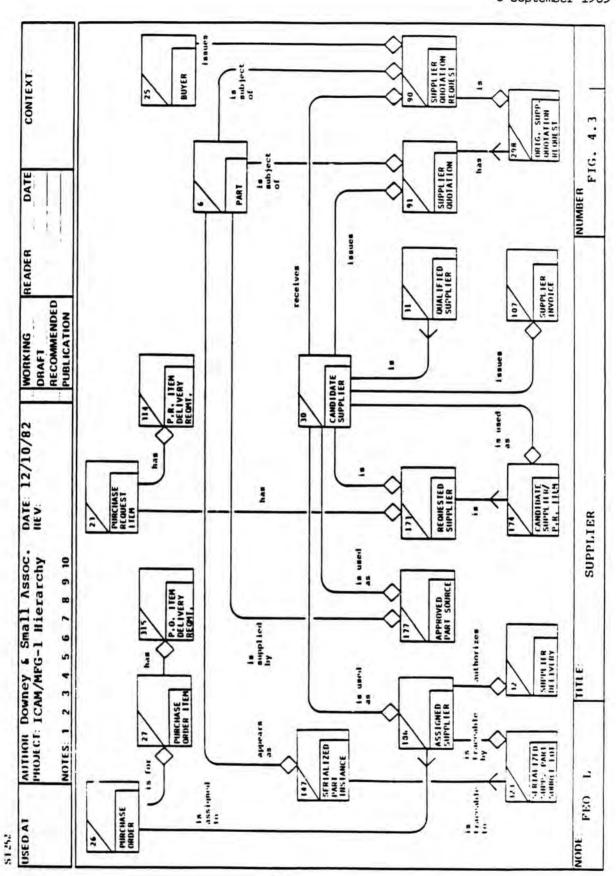
FEO K

TITLE:

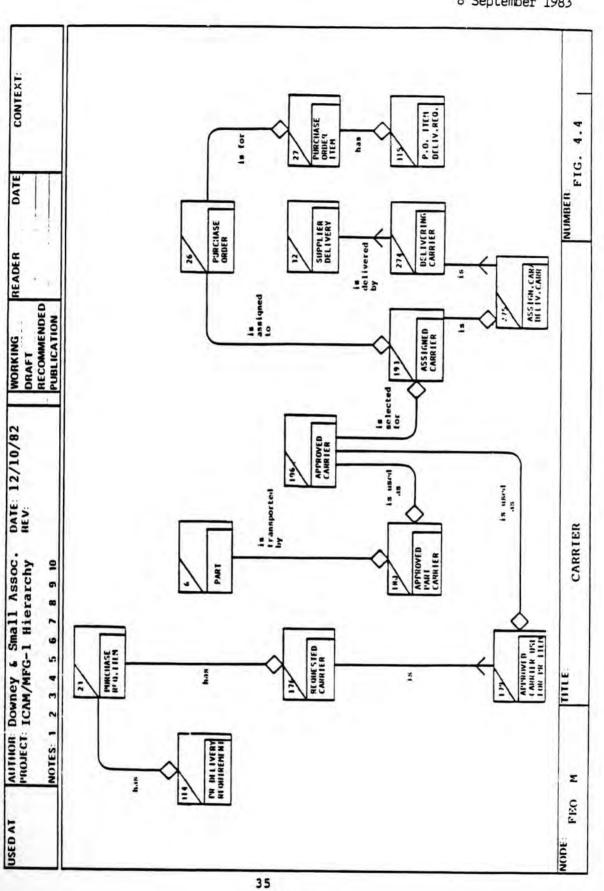
FTR110410000U September 1983

NUMBER

FIG. 4.2

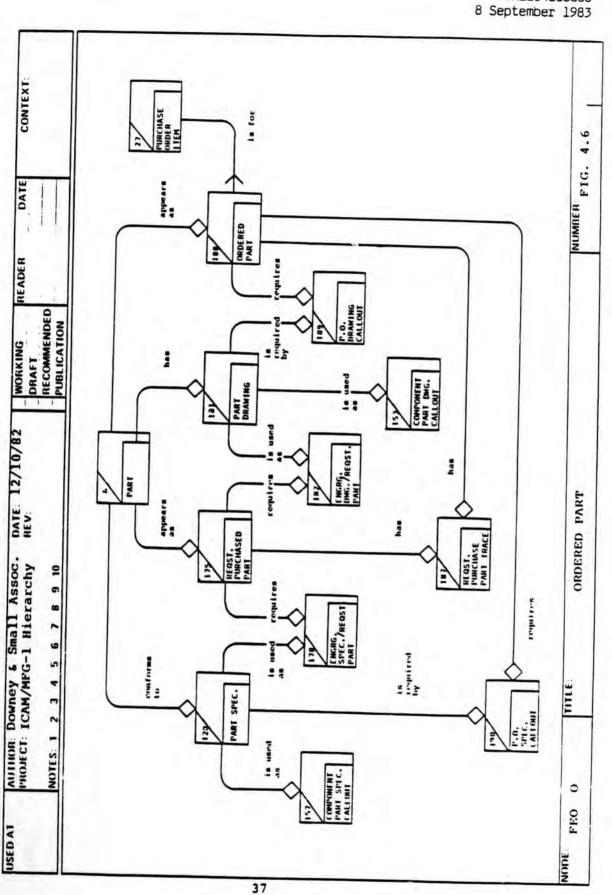


FTR110410000U 8 September 1983



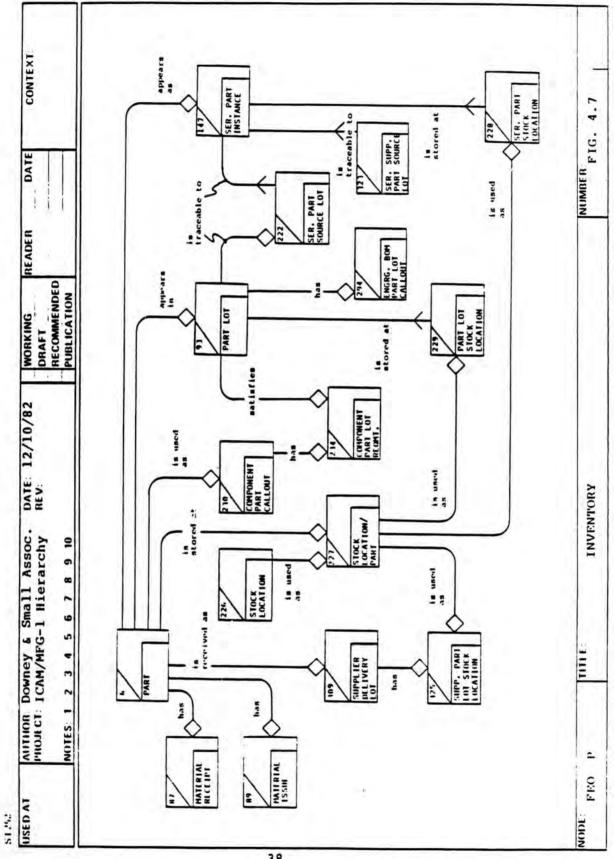
FTR110410000U 8 September 1983

FTR110410000U 8 September 1983



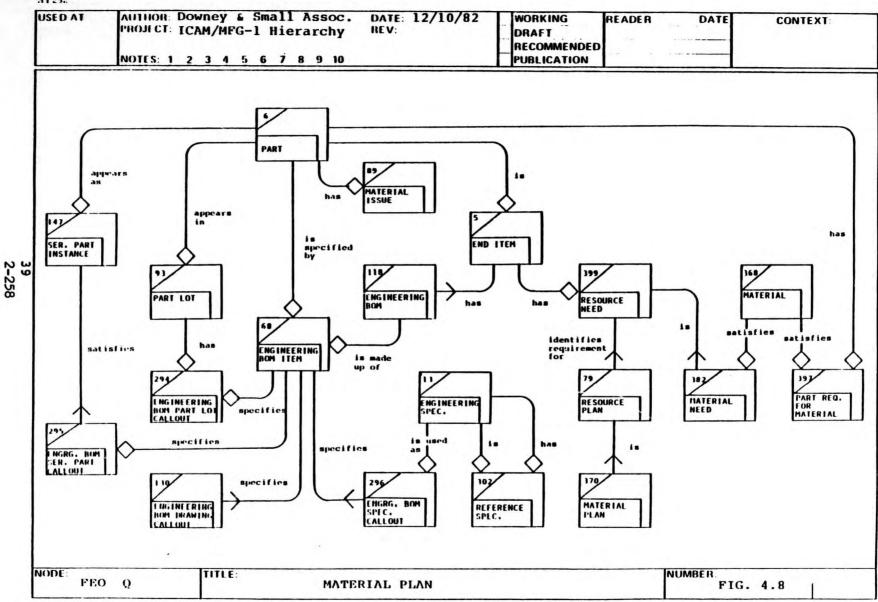
2-256

5T.552



 ∞

FTR110410000U September 1983



ST 25.2

FTR110410000U 8 September 1983

FTR110410000U September 1983

Section 2.9.3 ENTITY-FEO MATRIX

| TABLE 4.1 ENTITY-FEO MATRIX (X= Entity Class is on FEO) (O= Recommended for FEO) | TOOL | | D. PROCESS PLAN | - 1 | | . DIV. /FACTORY | | PUR | | | M. CARRIER | | 1 | O. MATERIAL PLAN | R. RESOURCE PLAN | |
|--|-------------|---|-----------------|-----|--------|-----------------|--------|-----|----|---|------------|---|---|------------------|------------------|---------|
| El Customer | XX | | | | X | . | Ξ Η | J | ¥ | 1 | Σ | Z | 1 | - C | . ~ | () |
| E2 Sales Order E4 Cost Account E5 End Item | X | X | x | - | X | X | 0 | X | X | | | | F | × | X | <u></u> |
| E6 Part | X X | X | X | X | | | X X | | | X | X | > | X | X | | X |
| E12 Released Engineering Dwg. E13 Engineering Specification E14 Engineering Change | x x | | | × | | | X | | | | | X | + | X | | = |
| E19 Purchased Item Rework Ord. E20 Purchased Item Scrap Ord. | | _ | - | - | | | X 0 | | - | | | X | F | | | _ |
| E22 Purchase Request E23 Purchase Request Item | | | | | | | | X | 13 | X | | | | | | Ξ |
| E24 Purchase Request Change E25 Buyer E26 Purchase Order | | _ | | - | | | | × | X | X | X | | + | | | = |
| E27 Purchase Order Item E28 Purchase Order Change E30 Candidate Supplier | | | | | | | | | X | X | X |) | - | | | |
| E31 Qualified Supplier E32 Supplier Delivery | | _ | _ | | | | | | | X | X | X | F | | | |
| E41 Tool Specification E42 Tool Drawing E45 Tool Type E47 Operation Tool Callout | X X X | | X | | | | X | | | | | | + | | | = |
| E51 Equipment E53 Operator E56 Machine | 0 X | | | | | X | | 4 | | | | | | | | |
| E57 Production Order E58 Standard Routing E63 Operation Standard | | X | X | X | X | _ | | _ | | | | = | + | | | |
| E66 Operator Station Assignmt. E68 Engineering BOM Item E69 Engineering Release | | | | | | X | < | = | | | | 2 | I | X | | _ |
| E74 Process Plan Mat. Callout E79 Resource Plan | | | X | | X | | _ | = 1 | | | | | # | Y | X | _ |
| E81 Sales Contract E84 Contract Revision E87 Material Receipt | X | X | | 1 | X X | > | (| | | | | | × | | ^ | |
| E88 Manufacture Reqst. E89 Material Issue | | X | | 1 | Į | | | | | | | | T | X | X | _ |

| ENTITY CLASS | FEO | A. TOOL | 7 | D. PROCESS PLAN | F. CONTRACT/SALES | G. DIV./FACTORY | | | PURCHASE | | M. DELIVERY CONFORM | ORDERED P | | O. MATERIAL PLAN R. RESOURCE PLAN S. END ITEM/PART | |
|---|-----|-----------------|---|-----------------|-------------------|-----------------|-----|-------------|----------|--------|---------------------|-----------|-----|--|---|
| E90 Supplier Quotation Reqst. E91 Supplier Quotation E92 Conformance Certification E93 Part Lot E95 Manufacturing Process | | x x | X | | X | | X | X | | X X | X X | | x_x | | - |
| E98 Equipment Callout E100 Station E105 Skill Certification E106 Approved Carrier E107 Supplier Invoice | | X X X 0 0 | | X X O | | X | _ X | | | × | | | | | |
| El09 Deviation Waiver El13 Supplier Return El14 Contract Item El16 Employee El18 Engrg.Bill of Material | | | | <u> </u> | x | X | | X | x | | X | | | | |
| E119 Engineering Chg.Item E120 Part Specification E123 Engineering Drawing Chg. E126 Engineering Spec.Chg. E130 Engr.BOM Dwg.Callout | | | | (| | > | (| | | | x | × | X | | |
| E131 Routing Item E132 Sales Order Item E134 Reference Drawing E139 Supplier Delivery Item E140 Operator/Machine Assignmt. | | | | × | × | X X | | | × | | × | - | X | | |
| E147 Serialized Part Instance E153 Component Part Dwg.Call. E157 Component Part Spec.Call. E161 Equipment Specification E162 Mfgr.Process Spec. | | 0 X |) | | | 0 | X | | X | | X | 3 | ×χ | X | |
| E170 P.R.Approval Authority E171 Purchase Request Approval E172 Contract Purchase Request E173 Requested Supplier E174 Candidate Sup./P.R.Item | | | | X | x | | | X X X | × | | | | | | |
| 175 Requested Purchased Part 176 Requested Carrier 177 Approved Part Source 178 Engrg.Spec./Requested Part 179 Approvd Carrier/P.R.Item | E | | | | | | | X | x | X | × | F | | | |

| ENTITY CLASS | FEO | C. PROD. ORDER | | E. STD. ROUTING | | G. DIV./FACTORY | H. ENGRG. ORDER | I. Q. A. | K. PURCHASE ORDER | L. SUPPLIER | . CARRIER | N. DELIVERY CONFORM O. ORDERED PART | ١. | Q. MATERIAL PLAN | R. RESOURCE PLAN S. END ITEM/PART |
|--|-----|----------------|--------|-----------------|----|-----------------|-----------------|----------|-------------------|-------------|-----------|--|------|------------------|--------------------------------------|
| E180 Approved Part Carrier E181 Part Drawing E182 Engrg.Dwg./Requested Part E183 P.O.Approval Authority E186 Assigned Supplier | | | X | | | | X | | X | x | X | x _x | | | |
| E187 Req.Purchase Part Trace. E188 Ordered Part E189 Purchase Order Dwg.Call. E190 Purchase Order Spec.Call. E191 Purchase Order Approval | | | | | | | | | X | | > | XXXXXX | | | |
| E192 Contract Purchase Order E193 Assigned Carrier E194 P.R.Change Approval E195 P.R.Item Chg.Effect. E196 Buyer Assignment | | | | | X_ | | | XXX | X | | X | | | - | - |
| E197 P.O.Item Chg.Effect. E198 P.O.Item Chg.Trace. E199 P.O.Chg.Approval E209 Serialized Raw Mat.Reqmt. E211 Raw Material Lot Reqmt. | | | X X | | | | | X | X | | | | | | |
| E212 Raw Material Dwg.Callout E213 Ser.Part Conform.Cert. E214 Inspector E215 Part Lot Conform.Cert. E217 Prod.Ord.Approval Auth. | | × | X | | | | × | | | | × | | | | |
| E218 Production Order Approval E219 Manufacturing Planner E220 Standard Routing Callout E221 Part Lot Assignment E222 Ser.Part Source Lot | | X | x > | 4 | | | | | | | | | | | |
| E223 Contract Production Order E224 Proc.Plan Part Dwg.Call. E225 Raw Material Spec.Call. E226 Stock Location E227 Stock Location/Part | | X | X | | x | | | | | | | | × × | | |
| E228 Ser.Part Stock Location E229 Part Lot Stock Location E230 Component Part Callout E233 Ser.Component Parts Req. E234 Component Part Lot Reqmt. | - | | X | | | - | | | | | | | ×××× | | |

| ENTITY CLASS | | A. TOOL B. EQUIPMENT | C. PROD. ORDER | D. PROCESS PLAN | | 50 | ENG | 7 | K. PURCHASE ORDER | SUPPLIER | | 7 | O. MATERIAL I LAN | 73. |
|---|----|---|----------------|------------------|---|--------|-----|---|-------------------|----------|-----|---|-------------------|-----|
| E236 Employee Skill E237 Equipment Skill Reqmt. E238 Process Skill Requirement E240 Station Equip.Location E242 Station/Process E243 Customer Tool E244 Customer Tool Callout E246 Company Tool E247 Company Tool Callout E249 Cust.Tool Conform.Cert. | I | X X X X X X X X X X X X X X X X X X X | | X X X X | X | X X | | | | | | | | |
| E250 Company Tool Conform.Cert E251 Equipment Spec.Callout E252 Tool Spec.Callout E254 Standard Routing Use E255 Part Process Spec.Use E256 Process Spec.Callout E257 Customer Equipment Reqmt. E259 Customer Equipment Instance E260 Owned Equipment Instance E261 Owned Equipment Reqmt. E264 Cust.Equip.Conform.Cert. E265 Owned Equip.Conform.Cert. E266 Delivery Rejection E267 Delivery Conformance Cert. E268 Purchased Part Rejection | | X X X X X X X X X | | X X X | | | X | | | | X X | | | |
| E269 Purchased Part Conf. Cert. E270 P.P.Spec.Non-conform. E271 P.P.Dwg.Non-conform. E272 P.P.Spec.Conform. E273 P.P.Drawing Conform. E274 Delivering Carrier E275 Asgnd.Carrier/Deliv.C. E276 Customer Equip.Statn.Asgn. E277 Owned Equip.Station Asgn. E278 Customer Equipment Type | | X | | | | | | | | | X | | | |
| E279 Owned Equip.Type E280 Req.for Cust.Equip.Type E282 Req.for Owned Equip.Type E284 Customer Tool Type E285 Company Tool Type | XX | X X X | | | | | | | | | | | | |

| ENTITY CLASS | PEO | 200 | B. EQUIPMENT | | D. PROCESS PLAN | | F. CONTRACT/SALES | G. DIV./FACTORY | . O. A. | J. PURCHASE REQUEST | K. PURCHASE ORDER | L. SUPPLIER | CARRIER | 7 | P. INVENTORY | R. RESOURCE PLAN S. END ITEM/PART |
|---|-----|------|--------------|---|-----------------|---|-------------------|-----------------|---------|---------------------|-------------------|-------------|---------|-------|---|-----------------------------------|
| E286 Req.for Cust.Tool Type E288 Req.for Company Tool Type E290 Tool Skill Requirement E291 Station/Tool Location E292 Cust.Tool Station Asgn. | | XXXX | | | | | > | | | | | | | | | |
| E293 Company Tool Station Asgn. E294 Engr.BOM Part Lot Callout E295 Engr.BOM Ser.Part Callout E296 Engr.BOM Spec.Callout E297 Serialized Part End Use | | X | | | | | | | | | | | _ | , | ××××××××××××××××××××××××××××××××××××××× | |
| E298 Orig.Supp.Quotation Req. E299 Component Part E300 Image Part E301 Alternate Part E302 Reference Specification | | | | (|) | | | | | - | | X | | | x | X X X |
| E303 Tool Drawing Callout E304 Sales Order Item/Ctr.Item E308 Work Breakdown Structure E309 Supplier Delivery Lot E311 WBS Use for P.R.Item | | X | , | X | | X | | | | X | X | | | , | | |
| E312 WBS Item E313 P.R.Item Unit of Measure E314 P.R.Item Delivery Reqmt. E315 P.O.Item Delivery Reqmt. E316 P.O.Item Unit of Measure | | X | | | | | | | | X X | X X | X > | | - | | X |
| E317 WBS Use for P.O.Item E318 Numerical Control Program E319 N.C.Program Callout E320 Machine Instruction E321 N.C.Pgm.Machine Use | | |) | 0 | | | | | | | X | | | - | | |
| E322 Quality Assurance Need E323 Ser.Supp.Part Source Lot E324 Part Spec.Requirement E325 Supp.Part Lot Stock Loc. E326 Employee Training | | 0 0 |) | 0 | | | | | 0 | - | | X | | × | | x |
| E327 Non-serialized Tool Type E328 Perish.Non-ser.Tool Type E329 Cust.Facil.Conform.Cert. E330 Owned Facil.Conform.Cert. E331 Statement of Work | | 0 0 | _ | | | X | 0 | | | | | | | | | |

| ENTITY CLASS | FEO | A. TOOL | - | 36 | | E. STD. ROUTING | F. CONTRACT/SALES | G. DIV./FACTORY | H. ENGRG. ORDER | J. PURCHASE REQUEST | K. PURCHASE ORDER | L. SUPPLIER | M. CARRIER | N. DELIVERY CONFORM | O. ORDERED PART | 1 | Q. MATERIAL PLAN | R. RESOURCE PLAN | S. END ITEM/PART |
|---|-----|---------|---|-----|---|-----------------|-------------------|-----------------|-----------------|---------------------|-------------------|-------------|------------|---------------------|-----------------|---|------------------|------------------|------------------|
| E332 Engrg.Change Proposal E333 Engineering Order E334 Authorized Operation E335 Section Activity E336 Manufacturing Proj.Plan E338 Schedule Change Request E340 Part Tool Requirement E341 End Item Reqmt.for Tool | | × | | × | X | X | X X O | | X | | | | | | | | | | |
| E342 Organization Equip.Reqmt. E344 WBS Item Tool Reqmt. E345 Dwg.Applic.to Sales Ctr. E346 Activity Policy E347 Program E348 Project E349 Type-version Ship E350 Station Callout | | x . | X | | | | X X X | | X X | | | | | | | | | x x | |
| E351 Index E352 Configuration Baseline E353 Milestone E354 Engineering Change Req. E355 Organization Task E358 Engrg.Order Use for ECP E359 Engrg.Order Use for ECR E360 Master Change Record | | | | | | 1 | X | x : | X X | | | | | | | | | X | |
| 2361 Approved Engineering Ord. 2362 Test Requirement 2363 Section 2364 Method Use 2365 Schedule Change Authoriz. 2366 Type-version Ship Callout | | | | | | o X | 0 | | X X | | | | | | | | | X | |
| 2367 Configurated Item 2368 Material 2370 Material Plan 2371 Manpower Plan 2372 Tooling Plan 2373 Facilities Plan | | |) | () | _ | 1 | | | | | | | | | - | _ |) | _ <u>X</u> | |
| 374 Quality Control Plan 375 Equipment Plan 377 Planning Parts List Item 378 Cuating Specification | | | | | × | - | | 0 | | | | | | | - | | _> | <u> </u> | |

| ENTITY CLASS | | F. CONTRACT/SALES G. DIV./FACTORY H. ENGRG. ORDER I. Q. A. J. PURCHASE REQUEST K. PURCHASE ORDER L. SUPPLIER M. CARRIER | ORDERED P INVENTORY MATERIAL RESOURCE END ITEM/ |
|--|---------------------------|---|---|
| E379 Visual Aid E380 Work Package E381 Approved Config.Baseline E382 Material Need E383 End Item Meth.Occurrence | X X | 0 0 | x |
| E384 Rescheduled Milestone E385 Drawing Material Callout E386 Planned Mfg.Opn.Mat.Req. E387 End Item Req.for Part E388 Fabrication Lot Sub Acct. | X | 0 X | x |
| E389 Lnd Item Work Element E390 End Item Req.for Dwg. E391 E.O.Applic.to End Item E392 Cutting Spec.Callout E393 Change Request Dwg.Call. | x | X | X. |
| E395 Visual Aid Callout E396 Planning Parts List E397 Part Requirement for Mat. E398 Delivery Schedule Item E399 Resource Need | X | X 0 | X |
| E400 Manpower Need E401 Tooling Need E402 Facilities Need E403 Equipment Need E404 Dwg.Applic.to Config.Base. | | X | X X X X |
| E405 Part Shortage E406 Stop Order E407 Availability of Material E408 Stop Order Application E409 Scheduled Part | X X X X | | |
| E411 Production Ord.Mat.Call. E412 Part Shortage Reconcil. E413 Facility Specification E414 Drawing E415 Process Plan | X X X | X X X X | |
| E416 Routing Header E417 Routing Item/Std.Routing E418 Process Planner E420 Process Plan/Prod.Ord. E421 Planned Manufacturing Opn. | X X X X X X X | X X | |

| ENTITY CLASS | FEO A. TOOL B. EQUIPMENT C. PROD. ORDER D. PROCESS PLAN E. STD. ROUTING F. CONTRACT/SALES G. DIV./FACTORY H. ENGRG. ORDER I. Q. A. J. PURCHASE ORDER I. Q. A. J. PURCHASE ORDER I. SUPPLIER M. CARRIER N. DELIVERY CONFORM O. ORDERED PART P. INVENTORY Q. MATERIAL PLAN R. RESOURCE PLAN S. END ITEM/PART |
|---|--|
| E422 Organization E423 Component Organization E424 First Article Evaluation E425 Inspector Evaluation E426 Major Non-Conformance E427 Mat.Rev.Bd.Disposition E428 Minor Non-Conformation E429 Non-Conformation Item E430 Standard Repair Callout E431 Quality Assurance Unit | |

Section 2.9.4

FEO HIERARCHY

TABLE A1

FEO HIERARCHY

| F1.0 | MANAG | EMENT A | ND RESOURCES | |
|------|-------|---------|----------------------------|-------|
| | F1.1 | Qualit | y Assurance | FEO 1 |
| | F1.2 | Resour | ce Plan | FEO F |
| | F1.3 | Tool | | FEO A |
| | F1.4 | Equipme | ent | FEO E |
| | 11.5 | DIVISI | on/Factory | FEO C |
| F2.0 | SALES | AND EN | GINEERING | |
| | F2.1 | Contra | ct/Sales Order | FEO F |
| | F2.2 | End Ite | em/Part | FEO S |
| | F2.3 | Engine | ering Order | FEO H |
| F3.0 | PRODU | CTION | | |
| | F3.1 | Product | ion Order | FEO C |
| | F3.2 | Process | Plan | FEO D |
| | F3.3 | Standar | rd Routing | FEO E |
| F4.0 | MATER | IAL | | |
| | F4.1 | REQUIRE | EMENTS | |
| | | F4.1.1 | Material Plan | FEO Q |
| | | F4.1.2 | Purchase Request | FEO J |
| | F4.2 | PURCHAS | SE | |
| | | F4.2.1 | Purchase Order Supplier | FEO K |
| | | F4.2.2 | Supplier | FEO L |
| | | F4.2.3 | Carrier | FEO M |
| | F4.3 | RECEIPT | | |
| | | F4.3.1 | Delivery Conformance | FEO N |
| | | F4.3.2 | Ordered Part | FEO O |
| | | F4.3.3 | Inventory | FEO P |

TABLE A2

ENTITY INDEX

(Organized by FEO Hierarchy)

P1.0 MANAGEMENT AND RESOURCES

F1.1 QUALITY ASSURANCE (FEO I)

Delivery Rejection, E266 First Article Evaluation, E424 Inspector, E214 Inspector Evaluation, E425 Major Non-Conformance, E426 Manufacturing Process, E95 Material Review Board Disposition, E427 Minor Non-Conformation, E428 Non-Conformation Item, E429 Part, E6 Part Lot, E93 Planned Manufacturing Operation, E421 Purchased Item Rework Order, E19 Purchased Item Scrap Order, E20 (R)* Quality Assurance Need, E322 (R) Quality Assurance Unit, E431 Serialized Part Instance, E147 Standard Repair Callout, E430

F1.2 RESOURCE PLAN (FEO R)

Activity Policy, E346 End Item, E5 Equipment Need, E403 Equipment Plan, E375 Facilities Need, E402 Pacilities Plan, E373 Manpower Need, E400 Manpower Plan, E371 Manufacture Request, E88 Material Need, E382 Material Plan, E370 Quality Assurance Need, E322 Quality Control Plan, E374 Resource Need, E399 Resource Plan, E79 Tooling Need, E401 Tooling Plan, E372

^{* (}R) indicates entity class recommended for inclusion in FEO.

F1.3 TOOL (FEO A)

Company Tool, E246 Company Tool Callout, E247 Company Tool Conformance Certification, E250 Company Tool Station Assignment, E293 Company Tool Type, E285 Conformance Certification, E92 Customer, El Customer Facility Conformance Certification, E329 Customer Tool, E243 Customer Tool Callout, E244 Customer Tool Conformance Certification, E249 Customer Tool Station Assignment, E292 Customer Tool Type, E284 Employee Skill, E236 Employee Training, E326 End Item, E5 End Item Requirement for Tool, E341 Engineering Specification, El3 Non-serialized Tool Type, E327 Operation Tool Callout, E47 Owned Facility Conformance Certification, E330 (R) Part, E6 Part Tool Requirement, E340 Perishable Non-serialized Tool Type, E328 Released Engineering Drawing, E12 Requirement for Company Tool Type, E288 Requirement for Customer Tool Type, E286 Sales Contract, E81 Skill Certification, El05 (R) Station, E100 Station/Tool Location, E291 Tool Drawing, E42 Tool Drawing Callout, E303 Tool Skill Requirement, E290 Tool Specification, E41 Tool Specification Callout, E252 Tool Type, E45 Work Breakdown Structure Item, E312 Work Breakdown Structure Item Tool Requirement, E344

F1.4 EQUIPMENT (FEO B)

Conformance Certification, E92
Customer, E1
Customer Equipment Conformance Certification, E264
Customer Equipment Instance, E259
Customer Equipment Requirement, E257
Customer Equipment Station Assignment, E276
Customer Equipment Type, E278
Customer Facility Conformance Certification, E329 (R)
Employee Skill, E236
Employee Training, E326 (R)

Engineering Specification, El3 Equipment, E51 Equipment Callout, E98 Equipment Skill Requirement, E237 Equipment Specification, E161 Equipment Specification Callout, E251 Machine, E56 Machine Instruction, E320 (R) Numerical Control Program, E318 (R) Numerical Control Program Callout, E319 (R) Numerical Control Program Machine Use, E321 (R) Operator, E53 (R) Operator/Machine Assignment, E140 (R) Organization Equipment Requirement, E342 Owned Equipment Conformance Certification, E265 Owned Equipment Instance, E260 Owned Equipment Requirement, E261 Owned Equipment Station Assignment, E277 Owned Equipment Type, E279 Owned Facility Conformance Certification, E330 (R) Planned Manufacturing Operation, E421 Requirement for Customer Equipment Type, E280 Requirement for Owned Equipment Type, E282 Skill Certification, El05 (R) Station, 2100 Station Equipment Location, E240

F1.5 DIVISION/FACTORY (FEO G)

Component Organization, E423 (R) Cost Account, E4 Customer Facility Conformance Certification, E329 (R) Employee, El16 Engineering Change Request, E354 Facility Specification, E413 Index, E351 Machine, E56 Operator Station Assignment, E66 Organization, E422 Organization Equipment Requirement, E342 Organization Task, E355 Owned Facility Conformance Certification, E330 (R) Planned Manufacturing Operation, E421 Process Plan, E415 Routing Item, E131 Station, E100 Station Callout, E350 Station Equipment Location, E240 Station/Process, E242 Station/Tool Location, E291

F2.0 SALES & ENGINEERING

F2.1 CONTRACT/SALES ORDER (FEO F)

Approved Configuration Baseline, E381 (R) Configuration Baseline, E352 Contract Item, E114 Contract Production Order, E223 Contract Purchase Order, E192 Contract Purchase Request, E172 Contract Revision, E84 Cost Account, E4 Customer, El Customer Tool, E243 Delivery Schedule Item, E398 (R) Drawing Applicability to Sales Contract, E345 End Item, E5 Engineering Change Proposal, E332 Engineering Order, E333 Pabrication Lot Sub Account, E388 (R) Manufacturing Project Plan, E336 Milestone, E353 Part Lot, E93 Production Order, E57 Program, E347 Project, E348 Rescheduled Milestone, E384 (R) Resource Plan, E79 Sales Contract, E81 Sales Order, E2 Sales Order Item, E132 Sales Order Item/Contract Item, E304 Schedule Change Authorization, E365 (R) Schedule Change Request, E338 (R) Statement of Work, E331 Test Requirement, E362 (R) Type-version Ship, E349

F2.2 END ITEM/PART (FEO S)

Alternate Part, E301
Component Part, E299
Component Part Callout, E230
Component Part Specification Callout, E157
Configurated Item, E367
End Item, E5
End Item Requirement for Part, E387
End Item Work Element, E389
Image Part, E300
Index, E351
Part, E6
Serialized Component Parts Requirement, E233
Serialized Part End Use, E297
Serialized Part Instance, E147

Type-version Ship, E349
Type-version Ship Callout, E366
Work Breakdown Structure Item, E312
Work Package, E380

F2.3 ENGINEERING ORDER (FEO H)

Activity Policy, E346 Approved Configuration Baseline, E381 (R) Approved Engineering Order, E361 Change Request Drawing Callout, E393 Component Part Drawing Callout, E153 (R) Drawing, E414 Drawing Applicability to Configuration Baseline, E404 Drawing Applicability to Sales Contract, E345 Drawing Material Callout, E385 End Item, E5 (R) End Item Requirement for Drawing, E390 Engineering Bill of Material Drawing Callout, El30 Engineering Change, E14 Engineering Change Item, El19 Engineering Change Proposal, E332 Engineering Change Request, E354 Engineering Drawing Change, 2123 Engineering Order, E333 Engineering Order Applicability to End Item, E391 Engineering Order Use for Engineering Change Proposal, E358 Engineering Order Use for Engineering Change Request, E359 Engineering Release, E69 Engineering Specification, E13 Engineering Specification Change, E126 Master Change Record, E360 Part, E6 Part Drawing, E181 Planning Parts List, E396 Planning Parts List Item, E377 Process Plan, E415 Reference Drawing, E134 Released Engineering Drawing, E12 Sales Contract, E81 Sales Order, E2 Tool Drawing, E42

F3.0 PRODUCTION

F3.1 PRODUCTION ORDER (FEO C)

Authorized Operation, E334 Availability of Material, E407 Contract Production Order, E223 Cost Account, E4 End Item, E5 Fabrication Lot Sub Account, E388 (R) Manufacture Request, E88

Manufacturing Planner, E219 Material, E368 Part, E6 Part Lot, E93 Part Lot Assignment, E221 Part Shortage, E405 Part Shortage Reconciliation, E412 Process Plan, E415 Process Plan Use as Production Order, E420 Production Order, E57 Production Order Approval, E218 Production Order Approval Authority, E217 Production Order Material Callout, E411 Sales Contract, E81 Scheduled Part, E409 Stop Order, E406 Stop Order Application, E408 Work Breakdown Structure, E308

F3.2 PROCESS PLAN (FEO D)

Approved Engineering Order, E361 Authorized Operation, E334 Company Tool, E246 Company Tool Callout, E247 Component Part, E299 (R) Component Part Callout, E230 Component Part Drawing Callout, E153 (R) Customer Tool, E243 Customer Tool Callout, E244 Employee, Ell6 End Item, E5 End Item Method Occurrence, E383 Equipment Callout, E98 Machine Instruction, E320 (R) Material, E368 Numerical Control Program, E318 (R) Numerical Control Program Callout, E319 (R) Operation Standard, E63 Operation Tool Callout, E47 Part, E6 Part Drawing, E181 Part Specification, E120 Part Specification Requirement, E324 (R) Planned Manufacturing Operation, E421 Planned Manufacturing Operation Material Requirement, E386 Process Plan, E415 Process Plan Material Callout, E74 Process Plan Part Drawing Callout, E224 Process Plan Use as Production Order, E420 Process Planner, E418 Production Order, E57 Raw Material Drawing Callout, E212 Raw Material Lot Requirement, E211

Raw Material Specification Callout, E225 Serialized Part Instance, E147 Serialized Raw Material Requirement, E209 Skill Certification, E105 (R) Standard Routing Callout, E220 Work Package, E380

F3.3 STANDARD ROUTING (FEO E)

Cutting Specification, E378 Cutting Specification Callout, E392 Engineering Specification, E13 Manufacturing Process, E95 Manufacturing Process Specification, E162 Method Use, E364 Part, E6 Part/Process Specification Use, E255 Process Plan, E415 Process Skill Requirement, E238 Process Specification Callout, E256 Routing Header, E416 Routing Item, E131 Routing Item/Standard Routing, E417 Section, E363 (R) Section Activity, E335 Standard Routing, E58 Standard Routing Callout, E220 Standard Routing Use, E254 Station, E100 Station Callout, E350 Station/Process, E242 Visual Aid, E379 Visual Aid Callout, E395

P4.0 MATERIAL

F4.1 REQUIREMENTS

P4.1.1 MATERIAL PLAN (FEO Q)

End Item, E5
Engineering Bill of Material, E118
Engineering Bill of Material Item, E68
Engineering Bill of Material Drawing Callout, E130
Engineering Bill of Material Part Lot Callout, E294
Engineering Bill of Material Serialized Part Callout, E295
Engineering Bill of Material Specification Callout, E296
Engineering Specification, E13
Material, E368
Material Issue, E89
Material Need, E382
Material Plan, E370
Part, E6
Part Lot, E93

Part Requirement for Material, E397 Reference Specification, E302 Resource Need, E399 Resource Plan, E79 Serialized Part Instance, E147

F4.1.2 PURCHASE REQUEST (FEO J)

Approved Carrier Use for Purchase Request Item, E179 Buyer Assignment, E196 Contract Purchase Request, E172 Cost Account, E4 Employee, El16 Engineering Specification Used for Requested Part, E178 Purchase Order Item Change Effectivity, E197 Purchase Order Item Change Traceability, E198 Purchase Request, E22 Purchase Request Approval, E171 Purchase Request Approval Authority, E170 Purchase Request Change, E24 Purchase Request Change Approval, E194 Purchase Request Item, E23 Purchase Request Item Change Effectivity, E195 Purchase Request Item Delivery Requirement, E314 Purchase Request Item Unit of Measure, E313 Requested Carrier, E176 Requested Purchased Part, E175 Requested Supplier, E173 Supplier Quotation Request, E90 Work Breakdown Structure Use for Purchase Request Item, E311

F4.2 PURCHASE

F4.2.1 PURCHASE ORDER (FEO K)

Buyer, E25 Buyer Assignment, E196 Contract Purchase Order, E192 Cost Account, E4 Employee, El16 Ordered Part, E188 Purchase Order, E26 Purchase Order Approval, E191 Purchase Order Approval Authority, E183 Purchase Order Change, E28 Purchase Order Change Approval, E199 Purchase Order Item, E27 Purchase Order Item Change Effectivity, E197 Purchase Order Item Change Traceability, E198 Purchase Order Item Delivery Requirement, E315 Purchase Order Item Unit of Measure, E316 Supplier Delivery Item, E139 Work Breakdown Structure, E308 Work Breakdown Structure Use for Purchase Order Item, E317

F4.2.2 SUPPLIER (FEO L)

Approved Part Source, E177 Assigned Supplier, E186 Buyer, E25 Candidate Supplier, E30 Candidate Supplier Use for Purchase Request Item, E174 Originating Supplier Quotation Request, E298 Part, E6 Purchase Order, E26 Purchase Order Item, E27 Purchase Order Item Delivery Requirement, E315 Purchase Request Item, E23 Purchase Request Item Delivery Requirement, E314 Qualified Supplier, E31 Requested Supplier, E173 Serialized Part Instance, E147 Serialized Supplier Part Source Lot, E323 Supplier Delivery, E32 Supplier Invoice, E107 Supplier Quotation, E91 Supplier Quotation Request, E90

F4.2.3 CARRIER (PEO M)

Approved Carrier, E106
Approved Carrier Use for Purchase Request Item, E179
Approved Part Carrier, E180
Assigned Carrier, E193
Assigned Carrier Used as Delivering Carrier, E275
Delivering Carrier, E274
Part, E6
Purchase Order, E26
Purchase Order Item, E27
Purchase Order Item Delivery Requirement, E315
Purchase Request Item, E23
Purchase Request Item Delivery Requirement, E314
Requested Carrier, E176
Supplier Delivery, E32

F4.3 RECEIPT

F4.3.1 DELIVERY CONFORMANCE (FEO N)

Conformance Certification, E92
Delivery Conformance Certification, E267
Delivery Rejection, E266
Deviation Waiver, E109
Employee, E116
Engineering Specification, E13
Inspector, E214
Ordered Part, E188
Part Lot, E93
Part Lot Conformance Certification, E215

Part Specification, E120 Purchase Order Drawing Callout, E189 Purchase Order Specification Callout, E190 Purchased Item Rework Order, E19 Purchased Item Scrap Order, E20 Purchased Part Conformance Certification, E269 Purchased Part Drawing Conformance, E273 Purchased Part Drawing Non-conformance, E271 Purchased Part Rejection, E268 Purchased Part Specification Conformance, E272 Purchased Part Specification Non-conformance, E270 Reference Specification, E302 Serialized Part Conformance Certification, E213 Serialized Part Instance, E147 Supplier Delivery, E32 Supplier Delivery Item, E139 Supplier Return, E113

F4.3.2 ORDERED PART (FEO O)

Component Part Drawing Callout, E153
Component Part Specification Callout, E157
Engineering Drawing Use for Requested Part, E182
Engineering Specification Used for Requested Part, E178
Ordered Part, E188
Part, E6
Part Drawing, E181
Part Specification, E120
Purchase Order Drawing Callout, E189
Purchase Order Item, E27
Purchase Order Specification Callout, E190
Requested Purchase Part Traceability, E187
Requested Purchased Part, E175

F4.3.3 INVENTORY (FEO P)

Component Part Callout, E230 Component Part Lot Requirement, E234 Engineering Bill of Material Part Lot Callout, E294 Material Issue, E89 Material Receipt, E87 Part, E6 Part Lot, E93 Part Lot Stock Location, E229 Serialized Part Instance, E147 Serialized Part Source Lot, E222 Serialized Part Stock Location, E228 Serialized Supplier Part Source Lot, E323 Stock Location, E226 Stock Location Use for Part, E227 Supplier Delivery Lot, E309 Supplier Part Lot Stock Location, E325

Section 2.9.5

ENTITY INDEX

TABLE B1 ENTITY INDEX (ALPHABETICAL)

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|-------|-----------|
| Activity Policy | E346 | H,R | A-1 |
| Alternate Part | E301 | s | A3.3, 6.1 |
| Approved Carrier | E106 | м | A6.5 |
| Approved Carrier Use for Purchase Request Item | E179 | J,M | A5.2 |
| Approved Configuration Baseline | E381 | P*,H* | A-0 |
| Approved Engineering Order | E361 | D,H | A-0 |
| Approved Part Carrier | E180 | M | A6.5 |
| Approved Part Source | E177 | L | A5.2 |
| Assigned Carrier | E193 | M | A6.5 |
| Assigned Carrier Used as Delivering Carrier | E275 | M | A5.2 |
| Assigned Supplier | E186 | L | A5.2 |
| Authorized Operation | E334 | C,D | A1.3 |
| Availability of Material | E407 | С | A2.2 |
| Buyer | E25 | K,L | A5.2 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|---------|-------------|
| Buyer Assignment | E196 | J,K | A5.1,5.2 |
| Candidate Supplier | E30 | L | A5.2 |
| Candidate Supplier Use for Purchase Request Item | E174 | L | A5.2 |
| Change Request Drawing Callout | E393 | H | A-0,3.2,3.3 |
| Company Tool | E246 | A,D | A4.3 |
| Company Tool Callout | E247 | A,D | A4.3 |
| Company Tool Conformance Certification | E250 | A | A4.3 |
| Company Tool Station Assignment | E293 | λ | A3.3,4.3 |
| Company Tool Type | E285 | A | A4.3 |
| Component Organization | E423 | G* | A-0 |
| Component Part | E299 | D*,S | A3.2 |
| Component Part Callout | E230 | D,P,S | A3.3 |
| Component Part Drawing Callout | E153 | D*,H*,O | A3.3 |
| Component Part Lot Requirement | E234 | P | A2.0 |
| Component Part Specification Callout | E157 | 0,5 | A3.3 |
| Configurated Item | E367 | s | A-0 |
| Configuration Baseline | E352 | F | A-0 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|-----------|----------|
| Conformance Certification | E92 | A,B,N | A6.2 |
| Contract Item | E114 | F | A-1 |
| Contract Production Order | E223 | C,F | A6.1,6.3 |
| Contract Purchase Order | E192 | F,K | A5.2 |
| Contract Purchase Request | E172 | F,J | A5.2 |
| Contract Revision | E84 | F | A-1 |
| Cost Account | E4 | C,F,G,J,K | A2.4 |
| Customer | El | A,B,F | A1.2,6.5 |
| Customer Equipment Conformance Certification | E264 | В | A4.2 |
| Customer Equipment Instance | E259 | В | A3.3 |
| Customer Equipment Requirement | E257 | В | A3,3 |
| Customer Equipment Station Assignment | E276 | В | A4.1 |
| Customer Equipment Type | E278 | В | A4.2 |
| Customer Facility Conformance Certification | E329 | A*,B*,G* | A4.1 |
| Customer Tool | E243 | A,D,F | A4.3 |
| Customer Tool Callout | E244 | A,D | A4.3 |
| Customer Tool Conformance Certification | E249 | A | A4.3 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|--|------|----------------------|-----------|
| Customer Tool Station Assignment | E292 | A | A3.3,4.3 |
| Customer Tool Type | E284 | A | A4.3 |
| Cutting Specification | E378 | E | A1.4,6.1 |
| Cutting Specification Callout | E392 | E | A3.3,6.3 |
| Delivering Carrier | E274 | м | A5.2 |
| Delivery Conformance Certification | E267 | N | A5.3 |
| Delivery Rejection | E266 | I,N | A5.3 |
| Delivery Schedule Item | E398 | F* | A2.2,6.3 |
| Deviation Waiver | E109 | N | A6.3 |
| Drawing | E414 | н | A1.1,3.0 |
| rawing Applicability to Configuration Baseline | E404 | н | A1.1 |
| Orawing Applicability to Sales Contract | E345 | F,H | A1.0 |
| rawing Material Callout | E385 | н | A1.4,5.1, |
| Employee | E116 | D,G,J,K,N | A4.4,6.3 |
| Employee Skill | E236 | A,B | A4.0 |
| Employee Training | E326 | A*,B* | A1.4,4.0 |
| and Item | E5 | A,C,D,F, H*,Q,R,S | A6.3 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|-----|----------------------|
| End Item Method Occurrence | E383 | D | A6.3 |
| End Item Requirement for Drawing | E390 | н | A2.2,3.3 |
| End Item Requirement for Part | E387 | S | A3.2 |
| End Item Requirement for Tool | E341 | A | A6.2 |
| End Item Work Element | E389 | s | A2.1 |
| Engineering Bill of Material | E118 | Q | A2.2 |
| Engineering Bill of Material Drawing Callout | E130 | H,Q | A1.4,2.2, 5.1 |
| Engineering Bill of Material Item | E68 | Q | A2.2,3.0 |
| Engineering Bill of Material Part Lot Callout | E294 | P,Q | A3.3 |
| Engineering Bill of Material Serialized Part Callout | E295 | Q | A3.3 |
| Engineering Bill of Material Specification Callout | E296 | Q | A3.3 |
| Engineering Change | E14 | н | A1.1,2.2, 3.0,5.1 |
| Engineering Change Item | E119 | H | A1.1,2.2,5.1 |
| Engineering Change Proposal | E332 | F,H | A3.0 |
| Engineering Change Request | E354 | G,H | A3.2,3.3 |
| Engineering Drawing Change | E123 | н | Al.1,3.0 |
| Engineering Drawing Use for Requested Part | E182 | 0 | A5.2 |
| | | | |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFG0 |
|--|------|----------------|----------------------|
| Engineering Order | E333 | F,H | A-0 |
| Engineering Order Applicability to End Item | E391 | Н | A5.1,6.3 |
| Engineering Order Use for Engineering Change Proposal | E358 | Н | A-1 |
| Engineering Order Use for Engineering Change Request | E359 | Н | A-1 |
| Engineering Release | E69 | Н | Al.3,3.1,3.2, 3.3 |
| Engineering Specification | E13 | A,B,E,H N,Q | A3.2 |
| Engineering Specification Change | E126 | .1 | Al.1,2.3,3.0, 5.1 |
| Engineering Specification Used for Requested Part | E178 | J,0 | A3.2,3.3 |
| Equipment | E51 | В | A4.2,6.2,6.3 6.4 |
| Equipment Callout | E98 | B,D | A4.2 |
| Equipment Need | E403 | R | A3.3,4.2 |
| Equipment Plan | E375 | R | A1.4.,4.0 |
| Equipment Skill Requirement | E237 | В | A1.2 |
| Equipment Specification | E161 | В | A4.2 |
| Equipment Specification Callout | E251 | В | A4.2 |
| Fabrication Lot Sub Account | E388 | C*,F* | A2.3 |
| Facilities Need | E402 | R | A4.1 |

^{*} Recommend entity class be included on previous FEO indicated.
** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|-------------------------------------|------|-------|---------------------|
| Facilities Plan | E373 | R | A1.4,4.0 |
| Facility Specification | E413 | G | A1.2 |
| First Article Evaluation | E424 | I | •• |
| Image Part | E300 | s | A3.3 |
| Index | E351 | G,S | A1.3 |
| Inspector | E214 | I,N | A5.3,6.3 |
| Inspector Evaluation | E425 | I | ** |
| Machine | E56 | B,G | A4.2,6.2,6.3 6.4 |
| Machine Instruction | E320 | B*,D* | A6.3 |
| Major Non-Conformance | E426 | I | ** |
| Manpower Need | E400 | R | A4.4,6.1,6.3 |
| Manpower Plan | E371 | R | A1.4,4.0 |
| Manufacture Request | E88 | c | 2.0 |
| Manufacturing Planner | E219 | с | A3.0 |
| Manufacturing Process | E95 | E,I | A3.3 |
| Manufacturing Process Specification | E162 | E | A3.0 |
| Manufacturing Project Plan | E336 | F | A-0 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|--|------|-------|--------------|
| Master Change Record | E360 | н | A-1 |
| Material | E368 | C,D,Q | A5.2,5.3,5.4 |
| Material Issue | E89 | P,Q | A5.1 |
| !aterial Need | E382 | Q,R | Al.4,2.2,5.1 |
| Material Plan | E370 | Q,R | A1.4,5.1,5.2 |
| Material Receipt | E87 | P | A6.2 |
| Material Review Board Disposition | E427 | ı | ** |
| Method Use | E364 | E | A1.1 |
| Milestone | E353 | P | A-1,A2.2 |
| Minor Non-Conformance | E428 | I | ** |
| Non-Conforming Item | E429 | I | •• |
| Non-serialized Tool Type | E327 | A* | A4.3 |
| Numerical Control Program | E318 | B,D | A3.3 |
| Numerical Control Program Callout | E319 | B*,D* | A6.3 |
| Numerical Control Program Machine Use | E321 | B* | A6.3 |
| Operation Standard | E63 | D | A3.3 |
| Operation Tool Callout | E47 | A,D | A4.3, 6.3 |

Recommend entity class be included on previous FEO indicated. Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|--|------------|--------------------------------|----------|
| Operator | E53 | B* | A6.3 |
| Operator/Machine Assignment | E140 | B* | A6.3 |
| Operator Station Assignment | E66 | G | A4.0 |
| Ordered Part | E188 | K,N,O | A5.2 |
| Organization | E422 | G* | A-0 |
| Organization Equipment Requirement | E342 | B,G | A4.2 |
| Organization Task | E355 | G | A2.0 |
| Originating Supplier Quotation Request | E298 | L | A5.2 |
| Owned Equipment Conformance Certification | E265 | В | A4.2 |
| Owned Equipment Instance | E260 | В | A3.3 |
| Owned Equipment Requirement | E261 | В | A3.3 |
| Owned Equipment Station Assignment | E277 | В | A4.1 |
| Owned Equipment Type | E279 | В | A4.2 |
| Owned Facility Conformance Certification | E330 | A*,B*,G* | A4.1 |
| Part | E 6 | A,C,D,E, H,I,L,M,O P,Q,S | A6.3 |
| Part Drawing | E181 | D,H,O | A3.2,3.3 |
| Part Lot | E93 | C,F,I,N, P,Q | A6.1 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|---------|--------------------------|
| Part Lot Assignment | E221 | C | A2.2 |
| Part Lot Conformance Certification | E215 | N | A5.3 |
| Part Lot Stock Location | E229 | P | A6.2 |
| Part/Process Specification Use | E255 | E | A3.3 |
| Part Requirement for Material | E397 | Q | Al.4,3.3, 5.1,6.2,6.3 |
| Part Shortage | E405 | c | A6.2 |
| Part Shortage Reconciliation | E412 | c | A6.2 |
| Part Specification | E120 | D,N,O | A3.2,3.3 |
| Part Specification Requirement | E324 | D* | A3.2,3.3 |
| Part Tool Requirement | E340 | λ | A1.4 |
| Perishable Non-serialized Tool Type | E328 | A* | A4.3 |
| Planned Manufacturing Operation | E421 | B,D,G,I | A3.3 |
| Planned Manufacturing Operation Material Requirement | E386 | D | A3.3 |
| Planning Parts List | E396 | н | A2.0 |
| Planning Parts List Item | E377 | H* | A1.0 |
| Process Plan | E415 | C,D,E, | A3.2,4.3 |
| Process Plan Material Callout | E74 | D | A1.4,3.3 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO | |
|---|------|-------|----------------------|--|
| Process Plan Part Drawing Callout | E224 | D | A6.1 | |
| Process Plan Use as Production Order | E420 | C,D | A3.3,4.3, 6.1,6.3 | |
| Process Planner | E418 | D | A3.2,4.3 | |
| Process Skill Requirement | E238 | E | A4.0 | |
| Process Specification Callout | E256 | E | A3.0 | |
| Production Order | E57 | C,D,F | A6.1 | |
| Production Order Approval | E218 | c | A3.4,6.1 | |
| Production Order Approval Authority | E217 | c | A6.1 | |
| Production Order Material Callout | E411 | C | A3.3 | |
| Program | E347 | P | A-1 | |
| Project | E348 | F | A-1 | |
| Purchase Order | E26 | K,L,M | A5.2 | |
| Purchase Order Approval | E191 | K | A5.2 | |
| Purchase Order Approval Authority | E183 | ĸ | A5.2 | |
| Purchase Order Change | E28 | K | A5.1,5.2 | |
| Purchase Order Change Approval | E199 | K | A5.2 | |
| Purchase Order Drawing Callout | E189 | И,О | A5.2 | |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|---------|----------------------|
| Purchase Order Item | E27 | K,L,M,O | A3.2, 5.1 |
| Purchase Order Item Change Effectivity | E197 | J,K | A5.2 |
| Purchase Order Item Change Traceability | E198 | J,K | A5.2 |
| Purchase Order Item Delivery Requirement | E315 | K,L,M | A5.2 |
| Purchase Order Item Unit of Measure | E316 | K | A5.2 |
| Purchase Order Specification Callout | E190 | N,0 | A5.2 |
| Purchase Request | E22 | J | A4.1,4.2, 4.3,5.2 |
| Purchase Request Approval | E171 | J | A5.1,5.2 |
| Purchase Request Approval Authority | E170 | J | A5.1,5.2 |
| Purchase Request Change | E24 | J | A3.3,5.1 |
| Purchase Request Change Approval | E194 | J | A5.2 |
| Purchase Request Item | E23 | J,L,M | A4.1,4.2,4.3, 5.2 |
| Purchase Request Item Change Effectivity | E195 | J | A5.2 |
| Purchase Request Item Delivery Requirement | E314 | J,L,M | A5.1,5.2 |
| Purchase Request Item Unit of Measure | E313 | J | A5.1 |
| Purchased Item Rework Order | E19 | I,N | A6.3 |
| Purchased Item Scrap Order | E20 | I*,N | A6.3 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|------|----------|
| Purchased Part Conformance Certification | E269 | N | A5.3 |
| Purchased Part Drawing Conformance | E273 | N | A5.3 |
| Purchased Part Drawing Non-conformance | E271 | N | A5.3 |
| Purchased Part Rejection | E268 | N | A5.3 |
| Purchased Part Specification Conformance | E272 | N | A5.3 |
| Purchased Part Specification Non-conformance | E270 | N | A5.3 |
| Qualified Supplier | E31 | L | A5.2 |
| Quality Assurance Need | E322 | I*,R | A1.4 |
| Quality Assurance Unit | E431 | I | •• |
| Quality Control Plan | E374 | R | A1.4,6.3 |
| Raw Material Drawing Callout | E212 | D | A1.4 |
| Raw Material Lot Requirement | E211 | D | A3.3 |
| Raw Material Specification Callout | E225 | D | A2.0 |
| Reference Drawing | E134 | H | A3.2 |
| Reference Specification | E302 | и, Q | A3.3 |
| Released Engineering Drawing | E12 | A,H | A1.1,3.0 |
| Requested Carrier | E176 | J,M | A6.5 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|---|------|---------|------|
| Requested Purchase Part Traceability | E187 | 0 | A5.1 |
| Requested Purchased Part | E175 | J,0 | A5.2 |
| Requested Supplier | E173 | J,L | A5.3 |
| Requirement for Company Tool Type | E288 | A | A4.3 |
| Requirement for Customer Equipment Type | E280 | В | A4.1 |
| Requirement for Customer Tool Type | E286 | A | A4.3 |
| Requirement for Owned Equipment Type | E282 | В | A4.1 |
| Rescheduled Milestone | E384 | P* | A2.2 |
| Resource Need | E399 | Q,R | A6.1 |
| Resource Plan | E79 | F,Q,R | A1.3 |
| Routing Header | E416 | E | A3.3 |
| Routing Item | E131 | E,G | A3.3 |
| Routing Item/Standard Routing | E417 | Е | A3.3 |
| Sales Contract | E81 | A,C,F,H | A-1 |
| Sales Order | E2 | F,H | A-1 |
| Sales Order Item | E132 | P | A-1 |
| Sales Order Item/Contract Item | E304 | F | A-1 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFG0 |
|--|------|-------------------|------------|
| Schedule Change Authorization | E365 | F* | A2.1 |
| Schedule Change Request | E338 | F* | A2.4 |
| Scheduled Part | E409 | c | A2.2 |
| Section | E363 | E* | A1.1 |
| Section Activity | E335 | E | A-0 |
| Serialized Component Parts Requirement | E233 | s | A2.0 |
| Serialized Part Conformance Certification | E213 | N | A6.1 |
| Serialized Part End Use | E297 | s | A3.2 |
| Serialized Part Instance | E147 | D,I,L,N, P,Q,S | A1.3 |
| Serialized Part Source Lot | E222 | P | A1.3,6.1 |
| Serialized Part Stock Location | E228 | P | A6.2 |
| Serialized Raw Material Requirement | E209 | D | A2.0 |
| Serialized Supplier Part Source Lot | E323 | L,P | A6.2 |
| Skill Certification | E105 | A*,B*,D* | A4.0 |
| Standard Repair Callout | E430 | 1 | ** |
| Standard Routing | E58 | Е | A3.3 |
| Standard Routing Callout | E220 | D,E | 3.3 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | PEO | MFG0 |
|----------------------------------|------|---------|----------|
| Standard Routing Use | E254 | E | A3.3 |
| Statement of Work | E331 | F | A1.0,2.1 |
| Station | E100 | A,B,E,G | A4.1,6.3 |
| Station Callout | E350 | E,G | A6.3 |
| Station Equipment Location | E240 | B,G | A4.1 |
| Station/Process | E242 | E,G | A1.1 |
| Station/Tool Location | E291 | A,G | A3.3,4.3 |
| Stock Location | E226 | P | A6.2 |
| Stock Location Use for Part | E227 | P | A6.2 |
| Stop Order | E406 | С | A6.1 |
| Stop Order Application | E408 | c | A6.1 |
| Supplier Delivery | E32 | L,M,N | A5.2 |
| Supplier Delivery Item | E139 | K,N | A5.2 |
| Supplier Delivery Lot | E309 | P | A5.2,6.2 |
| Supplier Invoice | E107 | L | A5.2 |
| Supplier Part Lot Stock Location | E325 | P | A6.1,6.2 |
| Supplier Quotation | E91 | L | A5.2 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

| ENTITY CLASS | NO. | FEO | MFGO |
|-------------------------------|------|----------|----------------------|
| Supplier Quotation Request | E90 | J,L | A5.2 |
| Supplier Return | E113 | N | A5.3,6.4 |
| Test Requirement | E362 | F* | Al.4,6.4 |
| Tool Drawing | E42 | A,H | A4.3,6.2 |
| Tool Drawing Callout | E303 | Α | A4.3 |
| Tool Skill Requirement | E290 | Α | A4.0 |
| Tool Specification | E41 | A | A3.3,4.3 |
| Tool Specification Callout | E252 | A | A4.3 |
| Tool Type | E45 | A | A3.3,6.2 |
| Tooling Need | E401 | R | A3.3,4.3 |
| Tooling Plan | E372 | R | A1.4,4.0 |
| Type-version Ship | E349 | F,S | A-1 |
| Type-version Ship Callout | E366 | s | A-1 |
| Visual Aid | E379 | E | Al.1,1.3,1.4,3.3 |
| Visual Aid Callout | E395 | E | A3.3,6.1,6.3 |
| Work Breakdown Structure | E308 | C,K | A1.3,2.1,2.3 |
| Work Breakdown Structure Item | E312 | A,S | Al.3,2.1,2.3, 6.1 |

^{*} Recommend entity class be included on previous FEO indicated. ** Entities from new Quality Assurance FEO not yet assigned.

Section 3.1 NODE INDEX (MFG1)

| Entity Clas | <u>s</u> | Page |
|-------------|------------------------------|------|
| El | Customer | 3-18 |
| E2 | Sales Order | 3-20 |
| E4 | Cost Account | 3-22 |
| E5 | End Item | 3-24 |
| E6 | Part | 3-28 |
| E12 | Released Engineering Drawing | 3-32 |
| E13 | Engineering Specification | 3-34 |
| E14 | Engineering Change | 3-36 |
| E19 | Purchased Item Rework Order | 3-38 |
| E20 | Purchased Item Scrap Order | 3-40 |
| E22 | Purchase Request | 3-42 |
| E23 | Purchase Request Item | 3-44 |
| E24 | Purchase Request Change | 3-46 |
| E25 | Buyer | 3-48 |
| E26 | Purchase Order | 3-50 |
| E27 | Purchase Order Item | 3-54 |
| E28 | Purchase Order Change | 3-56 |
| E30 | Candidate Supplier | 3-58 |
| E31 | Qualified Supplier | 3-60 |
| E32 | Supplier Delivery | 3-62 |
| E41 | Tool Specification | 3-64 |
| E42 | Inol Drawing | 7.66 |

FTR110410000U 8 September 1983

| Entity Class | | Page |
|--------------|-----------------------------------|-------|
| E45 | Tool Type | 3-68 |
| E47 | Operation Tool Callout | 3-70 |
| E51 | Equipment | 3-72 |
| E53 | Operator | 3-74 |
| E56 | Machine | 3-76 |
| E57 | Production Order | 3-78 |
| E58 | Standard Routing | 3-82 |
| E63 | Operation Standard | 3-84 |
| E66 | Operator Station Assignment | 3-86 |
| E68 | Engineering Bill of Material Item | 3-88 |
| E69 | Engineering Release | 3-90 |
| E74 | Process Plan Material Callout | 3-92 |
| E79 | Resource Plan | 3-94 |
| E81 | Sales Contract | 3-96 |
| E84 | Contract Revision | 3-100 |
| E87 | Material Receipt | 3-102 |
| E88 | Manufacture Request | 3-104 |
| E89 | Material Issue | 3-106 |
| E90 | Supplier Quotation Request | 3-108 |
| E91 | Supplier Quotation | 3-110 |
| E92 | Conformance Certification | 3-112 |
| E93 | Part Lot | 3-114 |
| E95 | Manufacturing Process | 3-116 |

| Entity Class | | Page |
|--------------|--|-------|
| E98 | Equipment Callout | 3-118 |
| E100 | Station | 3-120 |
| E105 | Skill Certification | 3-122 |
| E106 | Approved Carrier | 3-124 |
| E107 | Supplier Invoice | 3-126 |
| E109 | Deviation Waiver | 3-128 |
| E113 | Supplier Return | 3-130 |
| E114 | Contract Item | 3-132 |
| E116 | Employee | 3-134 |
| E118 | Engineering Bill of Material | 3-138 |
| E119 | Engineering Change Item | 3-140 |
| E120 | Part Specification | 3-142 |
| E123 | Engineering Drawing Change | 3-144 |
| E126 | Engineering Specification Change | 3-146 |
| E130 | Engineering Bill of Material Drawing Callout | 3-148 |
| E131 | Routing Item | 3-150 |
| E132 | Sales Order Item | 3-152 |
| E134 | Reference Drawing | 3-154 |
| E139 | Supplier Delivery Item | 3-156 |
| E140 | Operator/Machine Assignment | 3-158 |
| E147 | Serialized Part Instance | 3-160 |
| E153 | Component Part Drawing Callout | 3-162 |
| E157 | Component Part Specification Callout | 3-16 |

| Entity Class | | Page |
|--------------|---|-------|
| E161 | Equipment Specification | 3-166 |
| E162 | Manufacturing Process Specification | 3-168 |
| E170 | Purchase Request Approval Authority | 3-170 |
| E171 | Purchase Request Approval | 3-172 |
| E172 | Contract Purchase Request | 3-174 |
| E173 | Requested Supplier | 3-176 |
| E174 | Approved Supplier Use for Purchase Request Item | 3-178 |
| E175 | Requested Purchase Part | 3-180 |
| E176 | Requested Carrier | 3-182 |
| E177 | Approved Part Source | 3-184 |
| E178 | Engineering Specification Used for Requested Part | 3-186 |
| E179 | Approved Carrier Use for Purchase Request Item | 3-188 |
| E180 | Approved Part Carrier | 3-190 |
| E181 | Part Drawing | 3-192 |
| E182 | Engineering Drawing Use for Requested Part | 3-194 |
| E183 | Purchase Order Approval Authority | 3-196 |
| E186 | Assigned Supplier | 3-198 |
| E187 | Requested Purchase Part Traceability | 3-200 |
| E188 | Ordered Part | 3-202 |
| E189 | Purchase Order Drawing Callout | 3-204 |
| E190 | Purchase Order Specification Callout | 3-20 |
| E191 | Purchase Order Approval | 3-208 |

| Entity Class | | Page |
|--------------|---|-------|
| E192 | Contract Purchase Order | 3-210 |
| E193 | Assigned Carrier | 3-212 |
| E194 | Purchase Request Change Approval | 3-214 |
| E195 | Purchase Request Item Change Effectivity | 3-216 |
| E196 | Buyer Assignment | 3-218 |
| E197 | Purchase Order Item Change Effectivity | 3-220 |
| E198 | Purchase Order Item Change Traceability | 3-222 |
| E199 | Purchase Order Change Approval | 3-224 |
| E209 | Serialized Raw Material Requirement | 3-226 |
| E211 | Raw Material Lot Requirement | 3-228 |
| E212 | Raw Material Drawing Callout | 3-230 |
| E213 | Serialized Part Conformance Certification | 3-232 |
| E214 | Inspector | 3-234 |
| E215 | Part Lot Conformance Certification | 3-236 |
| E217 | Production Order Approval Authority | 3-238 |
| E218 | Production Order Approval | 3-240 |
| E219 | Manufacturing Planner | 3-242 |
| E220 | Standard Routing Callout | 3-244 |
| E221 | Part Lot Assignment | 3-246 |
| E222 | Serialized Part Source Lot | 3-248 |
| E223 | Contract Production Order | 3-250 |
| E224 | Production Order Part Drawing Callout | 3-252 |
| E225 | Raw Material Specification Callout | 3-254 |

| Entity Class | | Page |
|--------------|---|-------|
| E226 | Stock Location | 3-256 |
| E227 | Stock Location Use for Part | 3-258 |
| E228 | Serialized Part Stock Location | 3-260 |
| E229 | Part Lot Stock Location | 3-262 |
| E230 | Component Part Callout | 3-264 |
| E233 | Serialized Component Part Requirement | 3-266 |
| E234 | Component Part Lot Requirement | 3-268 |
| E236 | Employee Skill | 3-270 |
| E237 | Equipment Skill Requirement | 3-272 |
| E238 | Process Skill Requirement | 3-274 |
| E240 | Station Equipment Location | 3-276 |
| E242 | Station/Process | 3-278 |
| E243 | Customer Tool | 3-280 |
| E244 | Customer Tool Callout | 3-282 |
| E246 | Company Tool | 3-284 |
| E247 | Company Tool Callout | 3-286 |
| E249 | Customer Tool Conformance Specification | 3-288 |
| E250 | Company Tool Conformance Certification | 3-290 |
| E251 | Equipment Specification Callout | 3-292 |
| E252 | Tool Specification Callout | 3-294 |
| E254 | Standard Routing Use | 3-296 |
| E255 | Part/Process Specification Use | 3-298 |
| E256 | Process Specification Callout | 3-300 |

| Entity Class | | Page |
|--------------|--|-------|
| E257 | Customer Equipment Requirement | 3-302 |
| E259 | Customer Equipment Instance | 3-304 |
| E260 | Owned Equipment Instance | 3-306 |
| E261 | Owned Equipment Requirement | 3-308 |
| E264 | Customer Equipment Conformance Certification | 3-310 |
| E265 | Owned Equipment Conformance Certification | 3-312 |
| E266 | Delivery Rejection | 3-314 |
| E267 | Delivery Conformance Certification | 3-316 |
| E268 | Purchase Part Rejection | 3-318 |
| E269 | Purchased Part Conformance Certification | 3-20 |
| E270 | Purchased Part Specification Non-Conformance | 3-322 |
| E271 | Purchased Part Drawing Non-Conformance | 3-324 |
| E272 | Purchased Part Specification Conformance | 3-326 |
| E273 | Purchased Part Drawing Conformance | 3-328 |
| E274 | Delivery Carrier | 3-330 |
| E275 | Assigned Carrier Use as Delivering Carrier | 3-332 |
| E276 | Customer Equipment Station Assignment | 3-334 |
| E277 | Owned Equipment Station Assignment | 3-336 |
| E278 | Customer Equipment Type | 3-338 |
| E279 | Owned Equipment Type | 3-340 |
| E280 | Requirement for Customer Equipment Type | 3-342 |
| E282 | Requirement for Owned Equipment Type | 3-344 |
| E284 | Customer Tool Type | 3-346 |

| Ent | ity Class | | Page |
|-----|-----------|--|-------|
| | E285 | Company Tool Type | 3-348 |
| | E286 | Requirement for Customer Tool Type | 3-350 |
| | E288 | Requirement for Company Tool Type | 3-352 |
| | E290 | Tool Skill Requirement | 3-354 |
| | E291 | Station/Tool Location | 3-356 |
| | E292 | Customer Tool Station Assignment | 3-358 |
| | E293 | Company Tool Station Assignment | 3-360 |
| | E294 | Engineering Bill of Material Part Lot Callout | 3-362 |
| | E295 | Engineering Bill of Material Serialized Part Callout | 3-364 |
| | E296 | Engineering Bill of Material Specification Callout | 3-366 |
| | E297 | Serialized Part End Use | 3-368 |
| | E298 | Originating Supplier Quotation Request | 3-370 |
| | E299 | Component Pait | 3-372 |
| | E300 | Image Part | 3-374 |
| | E301 | Alternate Part | 3-376 |
| | E302 | Reference Specification | 3-378 |
| | E303 | Tool Drawing Callout | 3-380 |
| | E304 | Sales Order Item/Contract Item | 3-382 |
| | E308 | Work Breakdown Structure | 3-384 |
| | E309 | Supplier Delivery Lot | 3-386 |
| | E311 | Work Breakdown Structure Use for Purchase Request Item | 3-388 |

| Entity Class | | Page |
|--------------|---|---------|
| E312 | Work Breakdown Structure Item | 3-390 |
| E313 | Purchase Request Item Unit of Measure | 3-392 |
| E314 | Purchase Request Item Delivery Requirement | 3-394 |
| E315 | Purchase Order Item Delivery Requirement | 3-396 |
| E316 | Purchase Order Item Unit of Measure | 3-398 |
| E317 | Work Breakdown Structure Use for Purchase Order Item | 3-400 |
| E318 | Numerical Control Program | 3-402 |
| E319 | Numerical Control Program Callout | 3-404 |
| E320 | Machine Instruction | 3-406 |
| E321 | Numerical Control Program Machine Use | 3-408 |
| E322 | Quality Assurance Need | 3-410 |
| E323 | Serialized Supplier Part Source Lot | 3-412 |
| E324 | Part Specification Requirement | 3-414 |
| E325 | Supplier Part Lot Stock Location | 3-416 |
| E326 | Employee Training | 3-418 |
| E327 | Non-Serialized Tool Type | 3-420 |
| E328 | Perishable Non-Serialized Tool Type | 3-422 |
| E329 | Customer Facility Conformance Certification | 3-424 |
| E330 | Owned Facility Conformance Certification | 3-426 |
| E331 | Statement of Work | 3-428 |
| E332 | Engineering Change Proposal | 3-432 |
| E333 | Engineering Order | 3_1/3/1 |

| Entity Class | | Page |
|--------------|---|-------|
| E334 | Authorized Operation | 3-43 |
| E335 | Section Activity | 3-43 |
| E336 | Manufacturing Project Plan | 3-44 |
| E338 | Schedule Change Request | 3-44 |
| E340 | Part Tool Requirement | 3-446 |
| E341 | End Item Requirement for Tool | 3-448 |
| E342 | Organization Equipment Requirement | 3-450 |
| E344 | WBS Item Tool Requirement | 3-452 |
| E345 | Drawing Applicability to Sales Contract | 3-454 |
| E346 | Activity Policy | 3-456 |
| E347 | Program | 3-458 |
| E348 | Project | 3-460 |
| E349 | Type-Version Ship | 3-462 |
| E350 | Station Callout | 3-464 |
| E351 | Index | 3-466 |
| E352 | Configuration Baseline | 3-468 |
| E353 | Milestone | 3-470 |
| E354 | Engineering Change Request | 3-474 |
| E355 | Organization Task | 3-476 |
| E358 | Engineering Order Use for Engineering Change Proposal | 3-478 |
| E359 | Engineering Order Use for Engineering Change Request | 3-480 |
| E360 | Master Change Record | 3-482 |

FTR110410000U 8 September 1983

| Entity Class | | Page |
|--------------|---------------------------------|-------|
| E361 | Approved Engineering Order | 3-484 |
| E362 | Test Requirement | 3-486 |
| E363 | Section | 3-488 |
| E364 | Method Used | 3-490 |
| E365 | Schedule Change Authorization | 3-492 |
| E366 | Type-Version Ship Callout | 3-494 |
| E367 | Configurated Item | 3-496 |
| E368 | Material | 3-498 |
| E370 | Material Plan | 3-500 |
| E371 | Manpower Plan | 3-504 |
| E372 | Tooling Plan | 3-506 |
| E373 | Facilities Plan | 3-508 |
| E374 | Quality Control Plan | 3-510 |
| E375 | Equipment Plan | 3-512 |
| E377 | Planning Parts List Item | 3-514 |
| E378 | Cutting Specification | 3-516 |
| E379 | Visual Aid | 3-518 |
| E380 | Work Package | 3-520 |
| E381 | Approved Configuration Baseline | 3-522 |
| E382 | Material Need | 3-524 |
| E383 | End Item Method Occurrence | 3-526 |
| E384 | Reschedule Milestone | 3-528 |
| E385 | Drawing Material Callout | 3-530 |

| Entity Class | | Page |
|--------------|--|-------|
| E386 | Planned Manufacturing Operation Material Requirement | 3-53 |
| E387 | End Item Requirement for Part | 3-53 |
| E388 | Fabrication Lot Sub Account | 3-53 |
| E389 | End Item Work Element | 3-53 |
| E390 | End Item Requirement for Drawing | 3-540 |
| E391 | Engineering Order Applicability to End Item | 3-54 |
| E392 | Cutting Specification Callout | 3-54 |
| E393 | Change Request Drawing Callout | 3-546 |
| E395 | Visual Aid Callout | 3-548 |
| E396 | Planning Parts List | 3-550 |
| E397 | Part Requirement for Material | 3-552 |
| E398 | Delivery Schedule Item | 3-554 |
| E399 | Resource Need | 3-556 |
| E400 | Manpower Need | 3-558 |
| E401 | Tooling Need | 3-560 |
| E402 | Facilities Need | 3-562 |
| E403 | Equipment Need | 3-564 |
| E404 | Drawing Applicability to Configuration Baseline | 3-566 |
| E405 | Part Shortage | 3-568 |
| E406 | Stop Order | 3-570 |
| E407 | Availability of Material | 3-572 |
| E408 | Stop Order Application | 3-574 |
| | | |

FTR110410000U 8 September 1983

| Entity Class | | Page |
|--------------|--------------------------------------|-------|
| E409 | Schedule Part | 3-576 |
| E411 | Production Order Material Callout | 3-578 |
| E412 | Part Shortage Reconcilation | 3-580 |
| E413 | Facility Specification | 3-582 |
| E414 | Drawing | 3-584 |
| E415 | Process Plan | 3-588 |
| E416 | Routing Header | 3-590 |
| E417 | Routing Item/Standard Routing | 3-592 |
| E418 | Process Planner | 3-594 |
| E420 | Process Plan Use as Production Order | 3-596 |
| E421 | Planned Manufacturing Operation | 3-598 |
| E422 | Organization | 3-602 |
| F423 | Component Organization | 3-604 |

Section 3.2

MFG1 DIAGRAMS & GLOSSARY

| 00 | |
|--------|--------|
| Septen | FTRL |
| mber] | 104100 |
| .983 | 000 |

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT RECOMMENDED | READER DATE | CONTEXT: |
|----------|--|---------------|---------------------------|---|-----------------------|
| | NOTES: 1 2 3 4 5 6 7 8 9 | 10 | PUBLICATION | | |
| | In order to assist those individu formal training in the IDEF ₁ med the diagrams that follow. | | | | |
| | Entity Class No. 5 Entity Class Name SEND ITEM Relation Class Label One-to-One Relation Class | as } | One Engri | A) is read "End Ite BOM". Each Eng Exactly One End It | rn BOM is |
| | Contract No End Item Ser Part No. Entity Class Name - ENGRN BOM | r. No. | | | |
| | | Made B B | Is Made Up BOM" Item | B) is read "End Eng o Of Zero, One, or is. Each Engrm BC Exactly One Engrn | Many Engry OM Item |
| NODE: | TITLE: | | | NUMBER: | |

| - | N |
|----|---|
| ., | |
| - | _ |

NODE:

TITLE:

| | AUTHOR: | DATE: REV: 8 9 10 | WORKING | READER | DATE | CONTEXT: |
|----------|-----------------------------|-------------------------|-------------|--------|------|----------|
| PROJECT: | PROJECT: | | DRAFT | D | | |
| | | | RECOMMENDED | | | |
| | NOTES: 1 2 3 4 5 6 7 8 9 10 | | PUBLICATION | | | |

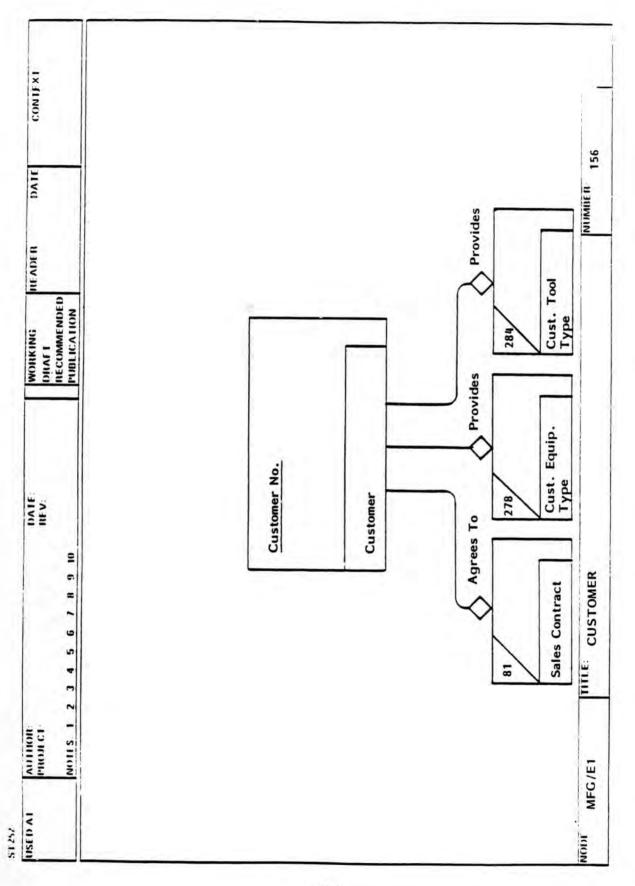
ENTITY CLASS DIAGRAMS AND GLOSSARY PAGES ARE INCLUDED FOLLOWING THIS PAGE DIAGRAMS ARE FROM THE MFG1 MODEL PUBLISHED IN JUNE 1981 AND FROM CHANGES.

CHANGES ARE A RESULT OF BOTH THE INCORPORATION OF REVIEWER COMMENTS

AND THE EFFECT OF COMPOSITING THE 5501/6201 ICV MODEL.

FTR110410000U September 1983

ENTITY CLASS DIAGRAMS NUMBER: 155



3-19

FTR110410000U September 1983

Entity Class Definition: Person or persons (or legal entity) with whom the company has agreed to perform specific services and/or produce a specific product in return for mutually agreeable compensation.

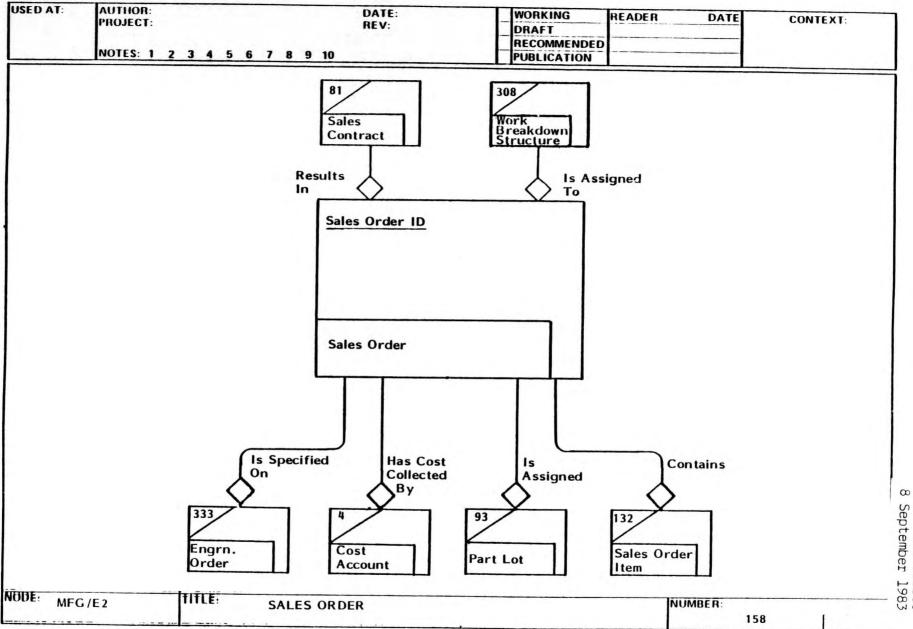
Key Classes: Customer No.

Owned Attribute Classes:

Name: Customer No.

Definition: A unique number assigned to each customer.

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|---------------------|--|--------|--------------------------------------|--------|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E1 (G1) | TITLE: GLOSSARY: CU | STOMER | | NUME | BÉR: 157 |



al-respondent historial and the second and an experience and an experience and an experience of the second and the second and

FTR110410000U September 1983

Entity Class Definition: Confirmation to the customer that work specified by the contract has been authorized and it provides the highest level of accounting control on the contract.

Key Classes: Sales Order ID

Owned Attribute Classes:

MFG/E2 (G1)

Name: Sales Order ID

Definition: A unique identifier assigned to each sales order.

GLOSSARY:

Name: Sales Order Name

Definition: A descriptive noun or noun-phrase that identifies the sales order area of application.

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|--------|--------------------------------------|--------|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Contract No. | Contract | 81 | Contract | 81 | results in |
| WBS No. | Work Browkdown Structure | 308 | Work Breakdown Structure | 308 | is assigned to |
| IODE: | TITLE: GLOSSARY | | | NUME | DÉR: |

SALES ORDER

FTR110410000U September 1983

159

COST ACCOUNT

THE PROPERTY OF THE PROPERTY O

NODE:

MFG/E4

HITLE:

FTR110410000U September 1983

NUMBER:

160

 ∞

Entity Class Definition: A costing control used for recording expenditures and labor which support the discrete

aspects of a program (e.g., engineering, tool, production, etc.).

Key Classes: Cost Account No.

Owned Attribute Classes:

Name: Cost Account No.

Definition: A number used to identify a specific cost collection account.

Name: Cost Account Name

Definition: A noun description associated with an account which offers a short qualitative description of the nature of the account.

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|----------|--------------------------------------|--------|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| WBS No. | Work Breakdown Structure | 308 | WBS Item | 312 | has cost collected by |
| Sales Order ID | Sales Order | 2 | Sales Order | 2 | has cost collected by |
| Organization ID | Organization | 422 | Organization | 422 | has |
| | | | | | |
| NODE: MFG/E4 (G1) | TITLE: GLOSSARY: CO | ST ACCOL | INT | NUMB | ER: |

GLOSSARY: COST ACCOUNT

NUMBER:

161

24

 ${\bf Entity} \ {\bf Class} \ {\bf Definition:} \ \ {\bf One} \ {\bf complete} \ {\bf deliverable,} \ {\bf contractual} \ {\bf item.}$

Entity Class Synonyms: Deliverable, Shippable, End Item Product

Key Classes: Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name: End Item Serial No.

Definition: A serially assigned number that uniquely identifies an instance of an end item.

Name: End Item Description

Definition: The configuration definition baseline plus customer negotiated changes for a given

unit type.

Name: End Item Major Assembly Sched In-Work Date

Definition: The scheduled date on which the major assembly of a given unit is to begin.

Name: End Item Major Assembly Scheduled Delivery Date

Definition: The scheduled date on which the unit is to be available for delivery to the customer.

Name: Installation Responsibility

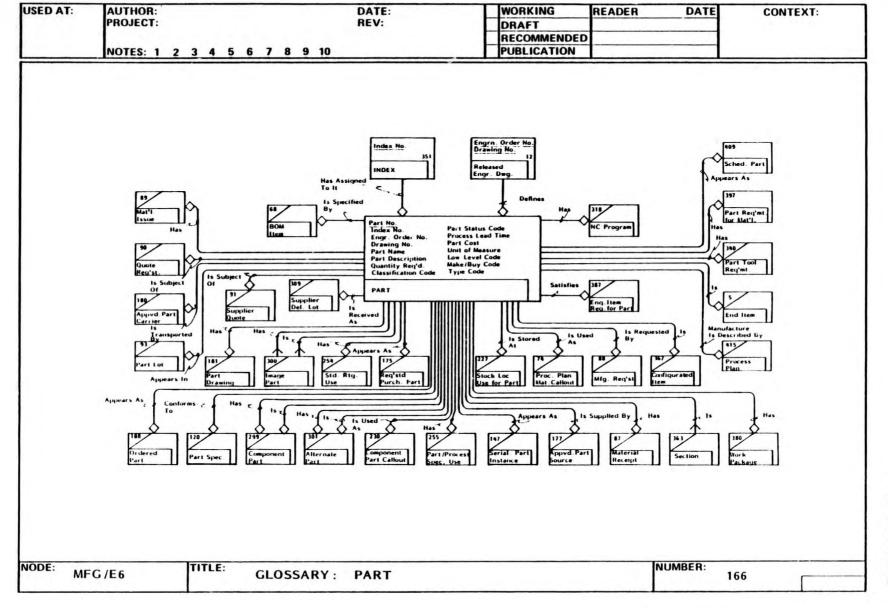
Definition: The designation of a particular production line organization adding the responsibility

for installing a specific major assembly on the aircraft.

NODE: NUMBÉR: 163/164 NUMBÉR: 163/164

FTR110410000U September 1983

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Contract No. | Sales Contract | 81 | Contract Item | 114 | requires |
| Contract Item No. | Contract Item | 114 | Contract Item | 114 | requires |
| WBS No. | Work Breakdown Structure | 308 | Deliver Scheduled Item | 398 | provide del. sched. for |
| Milestone Desc. | Milestone | 353 | Deliver Scheduled Item | 398 | provide del. sched. for |
| Del. Sched. Item No. | Delivery Schedule Item | 398 | Deliver Scheduled Item | 398 | provide del. sched. for |
| Part No. | Part | 6 | Part | 6 | is |
| Program Name | Program | 347 | Approved Config. Bsln. | 381 | describes |
| Config. Baseline No. | Approved Config. Basln. | 381 | Approved Config. Bsln. | 381 | describes |
| | | | | | |
| | 5] | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | 1 | | |
| | | | 7 | 421 L | |
| | | | | | |
| | | Y | | | |
| ODE: MEC/EE (C2) | Trivi e | | | | |
| MFG/E5 (G2) | TITLE: GLOSSARY: END | ITEM | | NUMB | ÉR: 165 |



 ∞

Entity Class Definition: A physical product which is uniquely identifiable from other products based on its

individual characteristics, which typically include form (shape), fit (dimensions), function (componentry), quality (the standard or specification it conforms to), etc.; typically, each part (each product sharing the same characteristics) is assigned a unique part number by which all instances of the same product are identified.

Key Classes: Part No.

Owned Attribute Classes:

Name: Part No.

Definition: A unique value which identifies an occurrence of part type; this same number is assigned

to every occurrence of the same part type, regardless of other identification (such as serial number) which might also be assigned to the part instance in addition to the part no.

Name: Part Name

Definition: A descriptive label assigned to the part appearing on an engineering drawing.

Name: Part Description

Definition: A descriptive statement about a part.

Name: Part Status Code

Definition: The code which identifies the inventory status of a part.

Name: Part Cost

Definition: The cost to manufacture the part.

Name: Part Unit of Measure

Definition: The units in which parts are issued.

Name: Classification Code

Definition: The commodity group in which the part resides.

Name: Low Level Code

Definition: The lowest occurrence of a part on a bill of material.

NODE: MFG/E6 (G1)

TITLE:

GLOSSARY: PART

NUMBÉR:

167/168

Owned Attribute Classes: (Continued)

Name: Make/Buy Code

Definition: A code which indicates whether a part is manufactured or purchased.

Name: Process Lead Time

Definition: The total amount of time required to manufacture the part.

Name: Type Code

Definition: The code which indicates which type manufacturing activity the part fits.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------|---------------------------|---------------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Index No. | Index | 351 | Index | 351 | has assigned to it |
| Eng. Order No. | Engineering Order | 333 | Released Eng. Drawing | 12 | defines |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | defines |
| | | | | | |
| NODE: MFG/E6 (G2) | TITLE: GLOSSARY: PAR | <u>!</u> Т | <u> </u> | NUMBÉ | I R: 169 |

ST252 USED AT:

AUTHOR:

170

Entity Class Definition: Drawings released through the engineering release system and made available for use by manufacturing.

Key Classes: Drawing No., Engineering Order No.

Owned Attribute Classes:

Name:

Definition:

| Attribute Class Owned Box | | Attribute Migration Path | | |
|---------------------------|--|--|--|---|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Engineering Release | 69 | Engineering Release | 69 | contains current |
| Drawing | 414 | Drawing | 414 | is called out as |
| Sales Contract | 81 | Activity Policy | 346 | is used by |
| Statement of Work | 331 | Activity Policy | 346 | is used by |
| Activity Policy | 346 | Activity Policy | 346 | is used by |
| | | | | |
| TITLE: DE | L FASED E | NCINEEDING DRAWING | INUMI | BÉR: |
| | Engineering Release Drawing Sales Contract Statement of Work Activity Policy | Entity Class Name Number Engineering Release 69 Drawing 414 Sales Contract 81 Statement of Work 331 Activity Policy 346 | Entity Class Name Engineering Release Drawing Sales Contract Statement of Work Activity Policy Activity Policy Activity Policy Statement of Work Activity Policy Activity Policy | Entity Class Name Engineering Release Engineering Release Drawing Sales Contract Statement of Work Activity Policy Activity Policy Activity Policy Statement of Work Activity Policy |

FTR110410000U September 1983

FTR110410000U September 1983

 ∞

ST252

173

Entity Class Definition: A textual statement of characteristics which must be exhibited by an object, or reflected

in a process, for it to be acceptable. This is typically a narrative restatement of the specifics of form, fit and function which are reflected graphically on a drawing of an object, but may also include quality requirements, finish requirements, handling and

procedural instructions, etc.

Entity Class Synonyms: Eng. Spec., Spec., Specification

Key Classes: Specification No.

Owned Attribute Classes:

Name: Specification No.

Definition: A number that uniquely identifies an occurrence of engineering specification.

| Inherited Attribute Class Own | Attribute Class Owned By: | | Attril | bute Migratio | n Path |
|-------------------------------|---------------------------|----------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Eng. Order No. | Engineering Order | 333 | Eng. Release | 69 | authorizes use of |
| IODE: MFG/E13 (G1) | TITLE: GLOSSARY: E | NGINEERI | NG SPECIFICATION | NUME | BÉR: |

Entity Class Definition: Reflects a uniquely identifiable grouping of revisions to previously released eng. documents.

Key Classes: (Eng. Change No.,) (Eng. Order No.)

Owned Attribute Classes:

Name: (Eng. Change No.)

Definition: A serially assigned number which uniquely identifies an occurrence of an engineering

change.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| (Eng. Order No.) | Eng. Order | 333 | Approved Eng. Order | 361 | is |
| | | | | | |
| ODE: MFG/E14 (G1) | TITLE: GLOSSARY: EN | IGINEERIN | IG CHANGE | NUME | BER: |

FTR110410000U 3 September 1983

176 NUMBER ↑ Results In Rework Order No. Delivery Rejection Purchased Item Rework Order 266/ PURCHASED ITEM REWORK ORDER PUBLICATION TITLE NODE MFG/E19

Entity Class Definition: An order which is issued when a review of an 'unacceptable' purchased item indicates

that its defect is of the nature that it may be corrected by additional work.

Key Classes: Rework Order No.

Owned Attribute Classes:

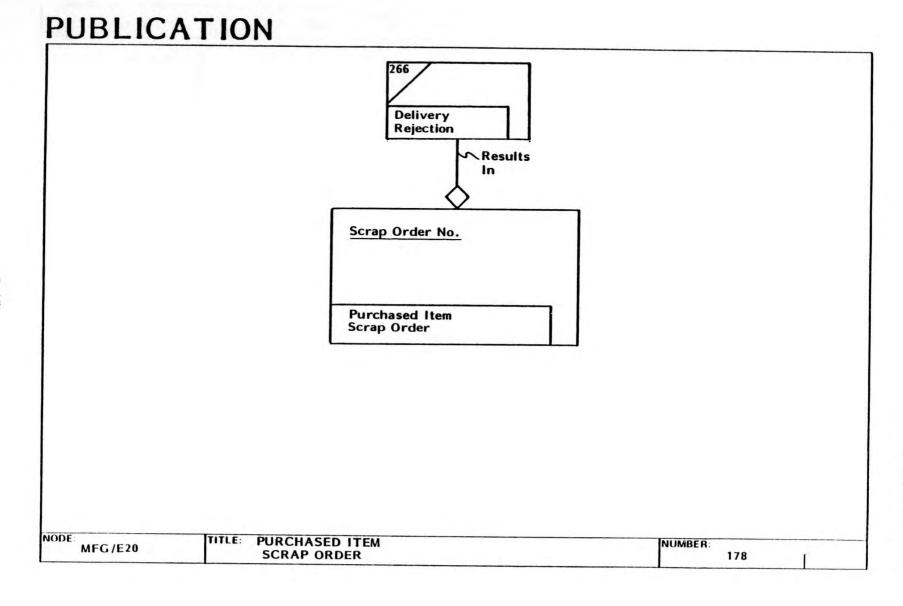
Name: Rework Order No.

Definition: A unique number assigned to each purchased item rework order.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|------------------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Receiving Report No. | Supplier Delivery | 32 | Delivery Rejection | 266 | results in |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Delivery Rejection | 266 | results in |
| ODE: MFG/E19 (G1) | GLOSSAKI. | IRCHASED | | NUME | BÉR: |

REWORK ORDER

FTR110410000U September 1983



179

Entity Class Definition: An order which is issued when a review of an unacceptable purchased item determines

that its defect is not correctable within engineering specifications or cost constraints,

and the part may not be returned to the supplier.

Key Classes: Scrap Order No.

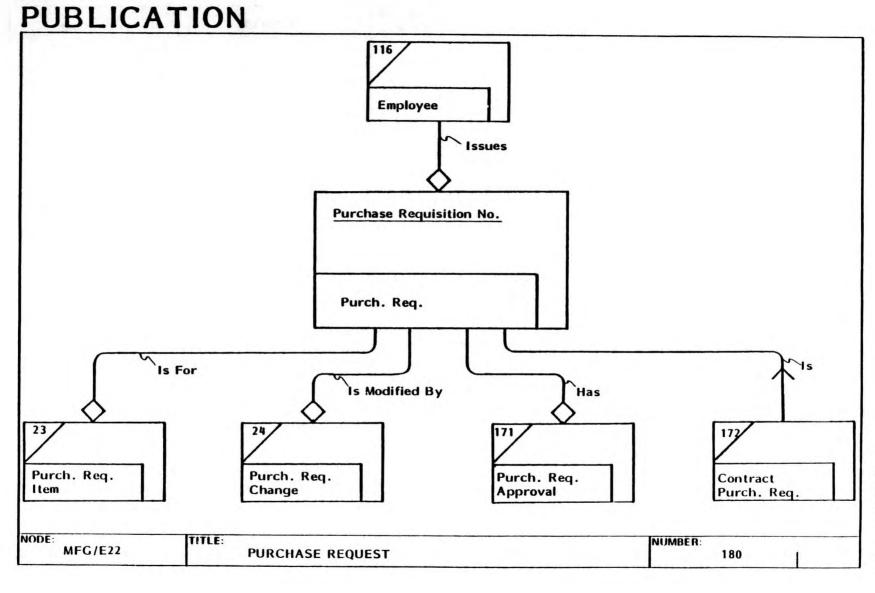
Owned Attribute Classes:

Name: Scrap Order No.

Definition: A unique number assigned to each purchased item scrap order.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|------------------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Receiving Report No. | Supplier Delivery | 32 | Delivery Rejection | 266 | results in |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Delivery Rejection | 266 | results in |
| | | | | | |
| | | | | 4 | |
| IODE: MFG/E20 (G1) | TITLE: GLOSSARY PU | RCHASED | ITEM | NUMB | J BER: |

SCRAP ORDER



FTR110410000U September 1983

Entity Class Definition: Reflects the existence of requests for the procurement of materials and/or services, each of which is uniquely identifiable and traceable to its originator.

Key Classes: Purchase Requisition No.

Owned Attribute Classes:

Name: Purchase Requisition No.

Definition: A unique number assigned to each purchase request.

Name: Requisition Date

Definition: Date that purchase request was initiated.

Name: Purchase Request Revision Level

Definition: A sequentially assigned number which is incremented by one each time a revision is made

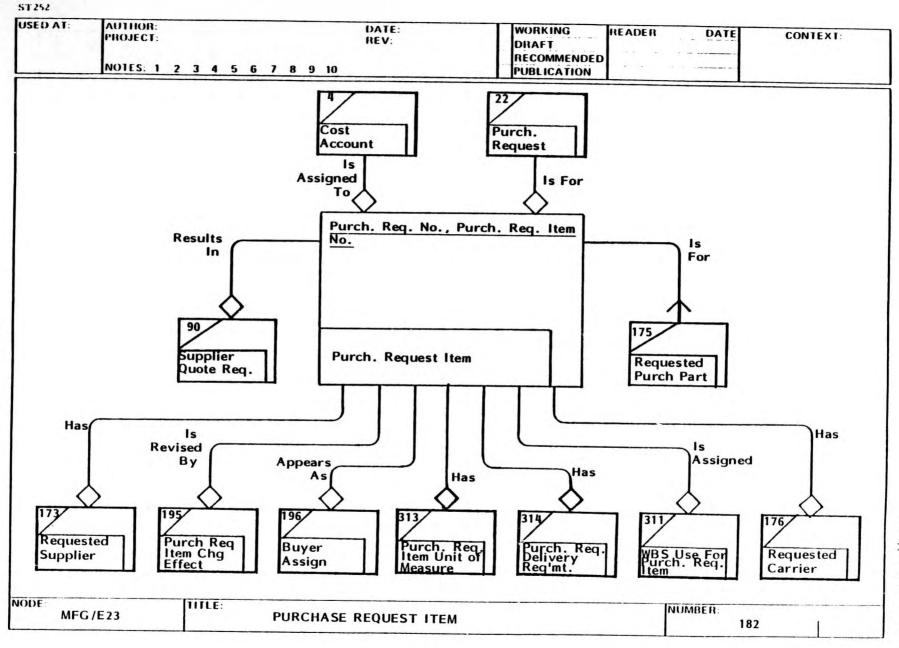
to a purchase requisition.

Name: Last Change Date of Purchase Requisition

Definition: The date of the most recent revision to the purchase requisition.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | issues |
| IODE: MFG/E22 (G1) | TITLE: GLOSSARY: PUI | RCHASE R | EQUEST | NUMB | BÉR: |

FTR110410000U September 1983 anna Haccanoa Haccanoa Haccanoa Antono de Caranda



FTR110410000U 8 September 1983

Entity Class Definition: A uniquely identifiable item of a purchase request, which defines the specifics of a

material or service which needs to be procured.

Key Classes: Purchase Requisition No., Purchase Requisition Item No.

Owned Attribute Classes:

Name: Purchase Requisition item No.

Definition: A serialized number of each item on a purchase requisition.

Name: Date Required

Definition: The date the item is required by the requester.

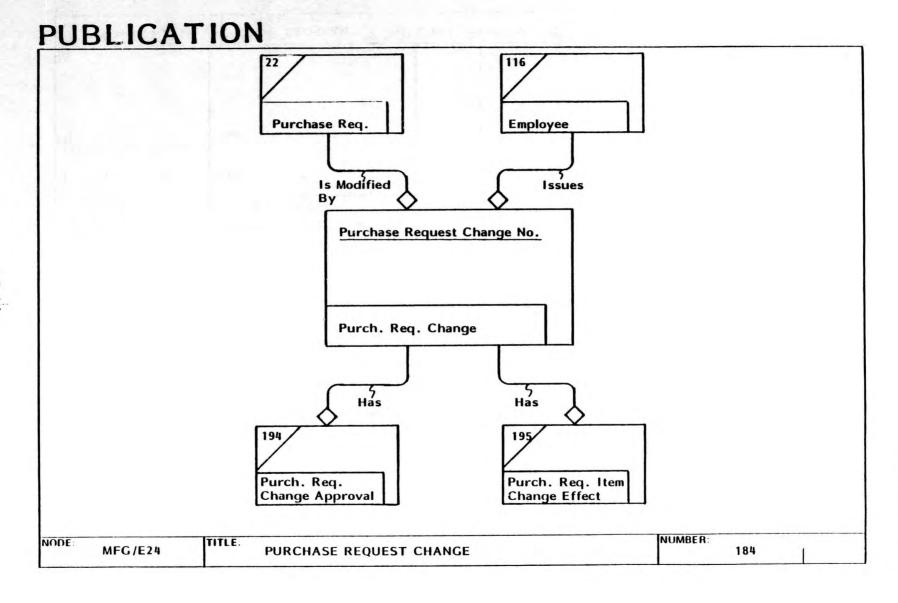
Name: Quantity Required
Definition: The quantity of the item required.

Name: Estimated Unit Price

Definition: An estimate of the unit price to the item required.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Cost Account No. | Cost Account | 4 | Cost Account | 4 | is assigned to |
| Purch. Requisition No. | Purchase Request | 22 | Purchase Request | 22 | is for |
| IODE: MFG/E23 (G1) | TITLE: GLOSSARY: PUI | RCHASE R | EQUEST ITEM | NUMBE | R: 183 |





Key Classes: Purchase Request Change No.

Owned Attribute Classes:

Name: Purchase Request Change No.

Definition: A unique number assigned to each purchase request change.

Entity Class Definition: A change which is made to a previously issued purchase request.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Purch. Req. No. | Purch. Request | 22 | Purch. Request | 22 | is modified by |
| Employee No. | Employee | 116 | Employee | 116 | issues |
| | | | | | |
| | | | 1 | | . 1 |
| | | | | | |
| | | | | | 1 |
| IODE: | Tire | <u> </u> | | | |
| MFG/E24 (G1) | TITLE: GLOSSARY: PUR | CHASE R | EQUEST CHANGE | NUME | BER: 185 |

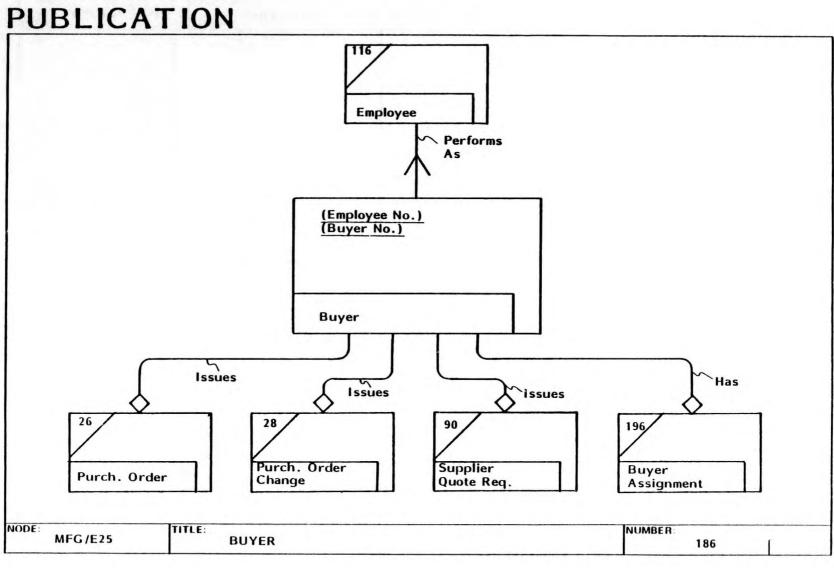
3-4

September 1983



 ∞

FTR110410000U September 1983



187

Entity Class Definition: An employee of the company who is authorized to negotiate with suppliers and issue purchase orders on the company's behalf.

Key Classes: (Employee No.), (Buyer No.)

Owned Attribute Classes:

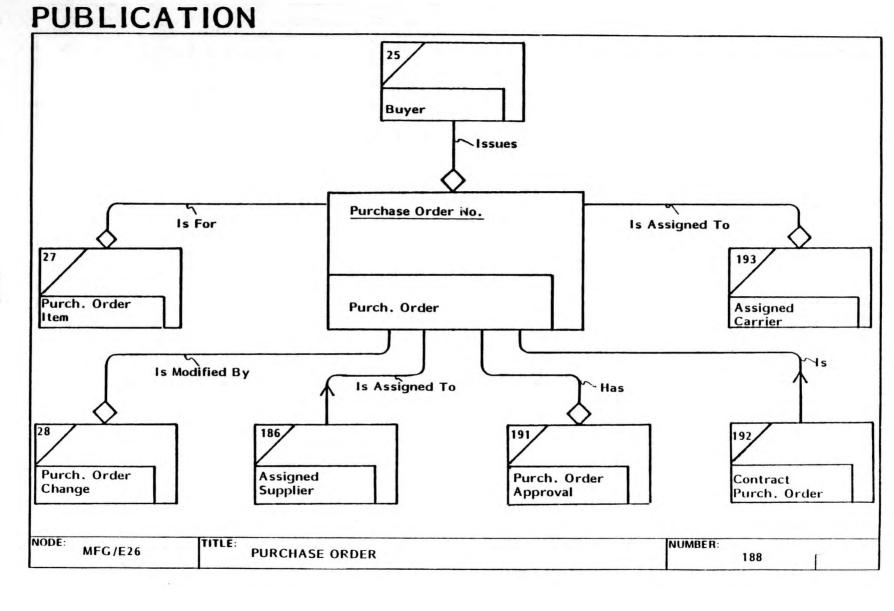
Name: Buyer No.

Definition: A unique identifying number assigned to each buyer.

Name: Buyer Name

Definition: The name of the buyer

| Inherited Attribut | Attribute Class Owned By: | | Attribute Migration Path | | n Path |
|----------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | performs as |
| ODE: MFG/E25 (G1) | TITLE: GLOSSARY: BUY | /ER | | NUMB | ER: |



 ∞

Entity Class Definition: An agreement between the company (or factory) and a supplier for the provision of

specified materials and/or services by the supplier in return for compensation by the

company per mutually agreeable terms and conditions.

Key Classes: Purchase Order No.

Owned Attribute Classes:

Name: Purchase Order No.

Definition: A unique number assigned to each purchase order.

Name: Purchase Order Activity Code

Definition: A code denoting current activity on a purchase order.

Name: Purchase Order Date

Definition: Date that purchase order was prepared.

Name: Purchase Order Type

Definition: Indicates whether order is for a single shipment, multiple shipments or is a blanket order

for a specified period of time.

Name: Acknowledgement Code

Definition: Indicates whether an acknowledgement is expected or has been received for a purchase order.

Name: Expected Acknowledgement Date

Definition: The date by which an acknowledgement of acceptance of a purchase order is expected from

the supplier.

Name: Acknowledgement Reminder Date

Definition: The date on which the supplier was reminded that the order had not yet been acknowledged.

Name: Expedite Date

Definition: The date on which the latest expedite notice was sent to the supplier.

Name: Estimated Cost

Definition: An estimate of the total cost of the purchase order.

Name: Order Discount Terms

Definition: Payment discount terms agreed to by the supplier.

NODE: MFG/E26 (G1)

LE: CLOSCADY.

GLOSSARY: PURCHASE ORDER

NUMBER:

189/190

3-53

FTR110410000U September 1983

191

Owned Attribute Classes: (Continued)

Name: Other Charges

Definition: Costs in addition to the purchase price of the items. Includes setup charges, miscellaneous

freight, insurance, handling, crating, etc.

Name: Date Closed

Definition: Date on which the processing of a purchase order is complete.

Name: Purchase Order Revision Level

Definition: A serially assigned number which is incremented by one each time a revision is made

to the purchase order.

Name: Purchase Order Last Change Date

Definition: The date of the most recent revision to the purchase order.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|---------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Buyer No. | Buyer | 25 | Buyer | 25 | issues |
| ODE: MFG/E26 (G2) | TITLE: GLOSSARY: PUR | CHASE O | RDER (Continued) | NUMBE | R: |

PURCHASE ORDER ITEM

DATE:

WORKING

READER

NUMBER:

192

FTR110410000U September 1983

ST 252 USED AT: Entity Class Definition: A uniquely identifiable requirement of a purchase order, which defines the specifics of the product of services rendered.

Key Classes: Purchase Order No., Purchase Order Item No.

Owned Attribute Classes:

MFG/E27 (G1)

Name: Purchase Order Item No.

Definition: A serialized number of each item on a purchase order.

GLOSSARY:

Name: Unit Price

Definition: The price per unit of measure.

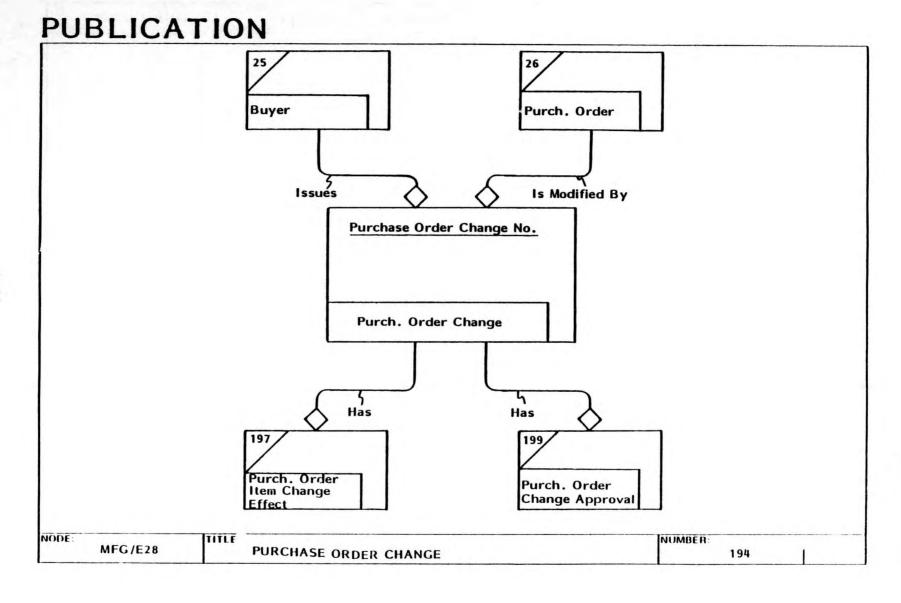
Name: Quantity Ordered Definition: The quantity of the item ordered.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Cost Account No. | Cost Account | 4 | Cost Account | 4 | is charged for |
| Purchase Order No. | Purchase Order | 26 | Purchase Order | 26 | is for |
| | | | | | |
| | | | | | |
| | | | | 4 | |
| | | | | | 1 |
| DDE: | TITLE: CLOSSARY: DU | | 0000 1001 | NUME | ÉR: |

PURCHASE ORDER ITEM

FTR110410000U September 1983

193



195

Entity Class Definition: A change which is made to a previously issued purchase order.

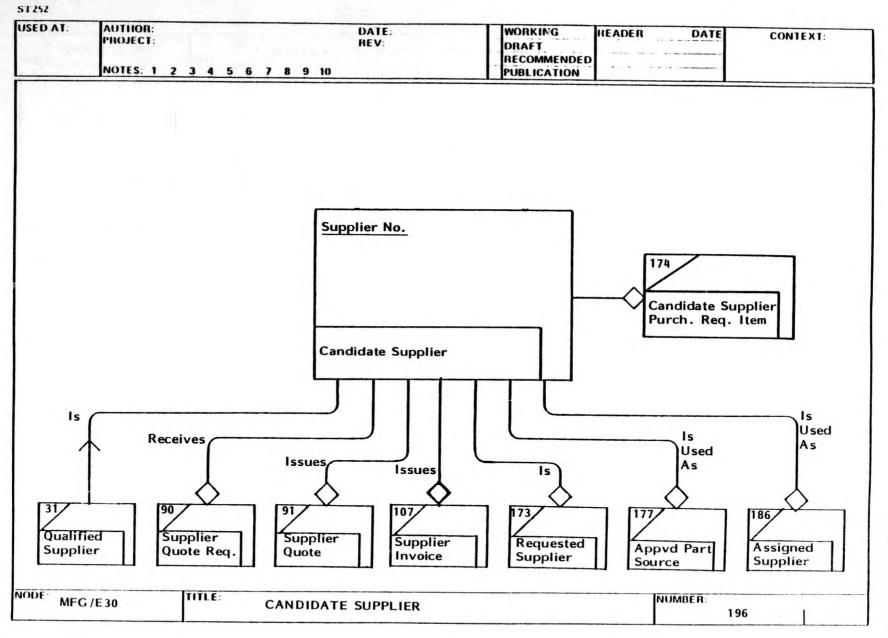
Key Classes: Purchase Order Change No.

Owned Attribute Classes:

Name: Purchase Order Change No.

Definition: A unique number assigned to each purchase order change.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Buyer No. | Buyer | 25 | Buyer | 25 | issues |
| Purch. Order No. | Purchase Order | 26 | Purch. Order | 26 | is modified by |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| MFG/E28 (G1) | TITLE: GLOSSARY: PUI | RCHASE O | I ORDER CHANGE | NUME | DÉR: |



FTR110410000U 8 September 1983

Entity Class Definition: A person, persons, company or legal entity from whom the company may agree to purchase materials and/or services in return for mutually agreeable compensation.

Entity Class Synonyms: Supplier, Vendor, Candidate Vendor

Key Classes: Supplier No.

Owned Attribute Classes:

Name: Supplier No.

Definition: A unique number assigned to each supplier.

Name: Supplier Name

Definition: The name by which a supplier is known.

Name: Supplier Address

Definition: Address of the supplier

Name: Supplier Representative

Definition: The name of the employee of the supplier to be contacted for information.

Name: Supplier Equal Employment Opportunity (EEO) Code

Definition: A code indicating whether or not a supplier has an equal employment opportunity program.

Name: Supplier Business Size Code

Definition: A federal government standard code which indicates the size of the supplier's business.

Name: Supplier Quality Assurance (QA) Code

Definition: A code assigned by the quality assurance organization which indicates the quality level

of a supplier.

Name: Supplier Audit Expiration Date

Definition: The expiration date of the quality level approval.

Name: Supplier Security Clearance Code

Definition: Supplier's security clearance level.

NODE:

MFG/E30 (G1)

TITLE:

GLOSSARY: C.

CANDIDATE SUPPLIER

NUMBER:

197

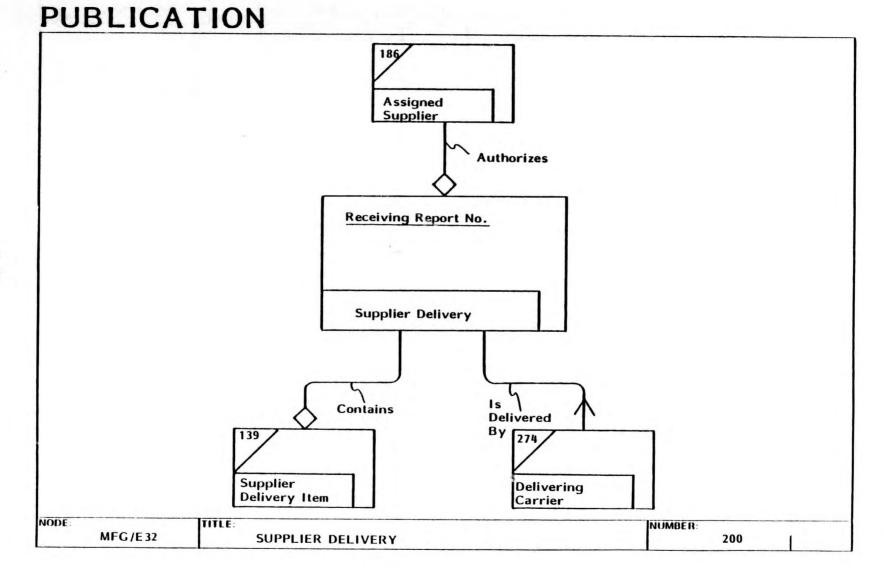
FTR110410000U 3 September 1983

| V | J |
|---|---|
| Ĭ | |
| O | 1 |
| _ | |

Key Classes: Supplier No. **Owned Attribute Classes:** Name: **Definition: Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Supplier No. Candidate Supplier Candidate Supplier 30 30 is NODE: MFG/E31 (G1) TITLE: NUMBER: **QUALIFIED SUPPLIER** GLOSSARY: 199

Entity Class Definition: A supplier who has met the requirement specified by the customer and/or the company on which consideration for the issuance of a purchase order is based.

FTR110410000U September 1983



 ∞

Entity Class Definition: Materials delivered to the company from the supplier or performance of required services, etc., in fulfillment of a corresponding purchase order.

Key Classes: Receiving Report No.

Owned Attribute Classes:

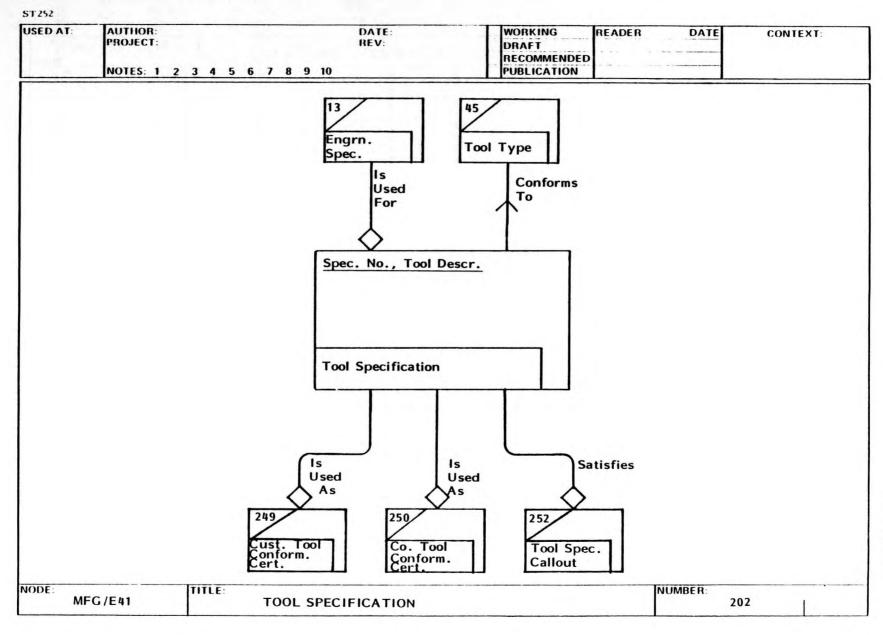
Name: Receiving Report No.

Definition: A unique number assigned to a document which records information regarding a vendor

delivery.

| te Class Owned By: Class Name se Order | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
|--|---------------|--------------------------------------|-----------------------------|--|
| se Order | 20 | | | |
| | 26 | Assigned Supplier | 186 | authorizes |
| CLOSSADY | | LIVERY | NUMB | DÉR: |
| | GLOSSARY: SUF | GLOSSARY: SUPPLIER DE | GLOSSARY: SUPPLIER DELIVERY | GLOSSARY: SUPPLIER DELIVERY |

 ∞ FTR110410000U September 1983



FTR110410000U 8 September 1983

203

Entity Class Definition: Specifies the technical and functional characteristics which must be exhibited by a specific tool type.

Key Classes: Specification No., Tool Desc.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Owned Attribute Class(es) Entity Class Name | Attribute Class Owned By: | | Attribute Migration Path | | |
|---|---------------------------|-----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | is used for |
| Tool Desc. | Tool Type | 45 | Tool Type | 45 | conforms to |
| | | | | | |
| ODE: MFG/E41 (G1) | TITLE: CLOSSARY: TO | DL SPECIE | I | NÜMB | DER: |

NODE: MFG/E41 (G1)

GLOSSARY: TOOL SPECIFICATION

FTR110410000U 8 September 1983

THE PROPERTY OF THE PARTY OF TH

Entity Class Definition: A graphic representation of a tool type which reflects its geometric configuration, dimensions and construction (form, fit and function).

Key Classes: Drawing No., Tool Desc., Eng. Order No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------------|---------------------------|--------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | is used as |
| Tool Desc. | Tool Type | 45 | Tool Type | 45 | has |
| Eng. Order No. | Engineering Order | 333 | Released Eng. Drawing | 12 | is used as |
| | | | | | |

NODE: MFG/E42 (G1)

TITLE:

GLOSSARY:

TOOL DRAWING

NUMBER:

ST252

NODE

MFG/E45

TITLE:

TOOL TYPE

FTR110410000U 8 September 1983

NUMBER:

Entity Class Definition: A device to be used in conjunction with a machine or by hand to aid in the production of parts; includes such things as perishable tools (drill bits, cutting tips, formers, etc.),

holding devices, jigs and fixtures, templates, measuring devices and gauges, etc.

Key Classes: Tool Desc.

Owned Attribute Classes:

Name: Tool Description

Definition: A description which uniquely identifies each tool (type).

Name: Estimated Tool Life

Definition: Interval after which the tool normally needs maintenance or replacement.

Name: Inspection Code

Definition: Specifies the inspection procedure for this tool type.

Name: Tool Weight

Definition: Weight of the specific type of tool.

NODE: TITLE: CLOSSADY. NUMBÉR:

MFG/E45 (G1) GLOSSARY: TOOL TYPE 207

FTR110410000U September 1983

Entity Class Definition: The requirement for a specific tool type which must be used in the performance of specific work defined by a planned manufacturing operation.

Key Classes: Process Plan No., Tool Desc., Line No.

Owned Attribute Classes:

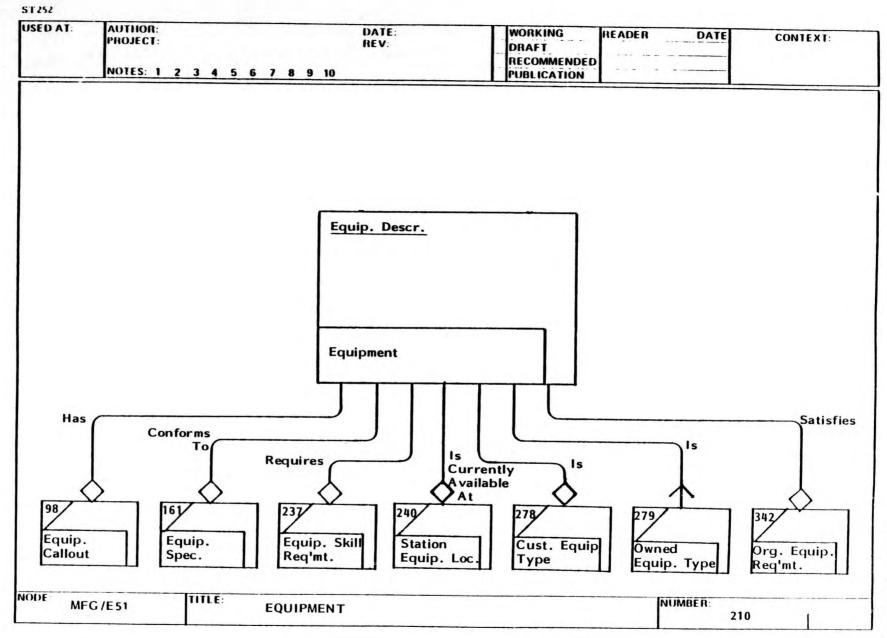
Name: Customer Tool No.

Definition: A unique no. used to ident. each tool that is owned by the customer.

| | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|--|------------------|---|------------------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Process Plan No. Line No. Tool Desc. | Process Plan Planned Mfg. Operation Tool Type | 415 421 45 | Planned Mfg. Oper. Planned Mfg. Oper. Tool Type | 421 421 45 | has has |
| IODE: MFG/E47 (G1) | TITLE: GLOSSARY: OP | ERATION | TOOL CALLOUT | NUME | DÉR: |

NUMBER: **OPERATION TOOL CALLOUT** GLOSSARY:

FTR110410000U September 1983



Entity Class Definition: A machine type used for a manufacturing operation.

Entity Class Synonyms: Machine Type, Equipment Type

Key Classes: Equipment Description

Owned Attribute Classes:

Name: Equipment Description

Definition: A description of each type of equipment including manufacturer and model where necessary

for unique identification of the equipment type.

Name: Machine Dimensions

Definition: Length, width, and height of the equipment type.

Name: Machine Weight

Definition: Weight of the equipment type.

Name: Machine Hour Rate

Definition: The standard machine cost per hour.

Name: Equipment Availability Standard

Definition: Ratio of downtime hours to running hours.

Name: Equipment Downtime Standard

Definition: Allowable number of times per year that the machine can go down without serious consequences.

Name: Planned Queue Time

Definition: Standard time interval during which a shop order awaits processing by an equipment type.

NODE: MFG/E51 (G1)

TITLE:

GLOSSARY: EQUIPMENT

NUMBER:

5-74

3-75

Entity Class Definition: An employee who is qualified to operate specific equipment types, use specific tool types, and/or perform specific processes.

Key Classes: (Employee No.) (Operator No.)

Owned Attribute Classes:

Name: Operator No.

Definition: A unique number assigned to each operator.

| Inherited Attribute C | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | performs as |
| ODE: MFG/E53 (G1) | TITLE: GLOSSARY: OPE | RATOR | | NUMB | ER: 213 |

3-77

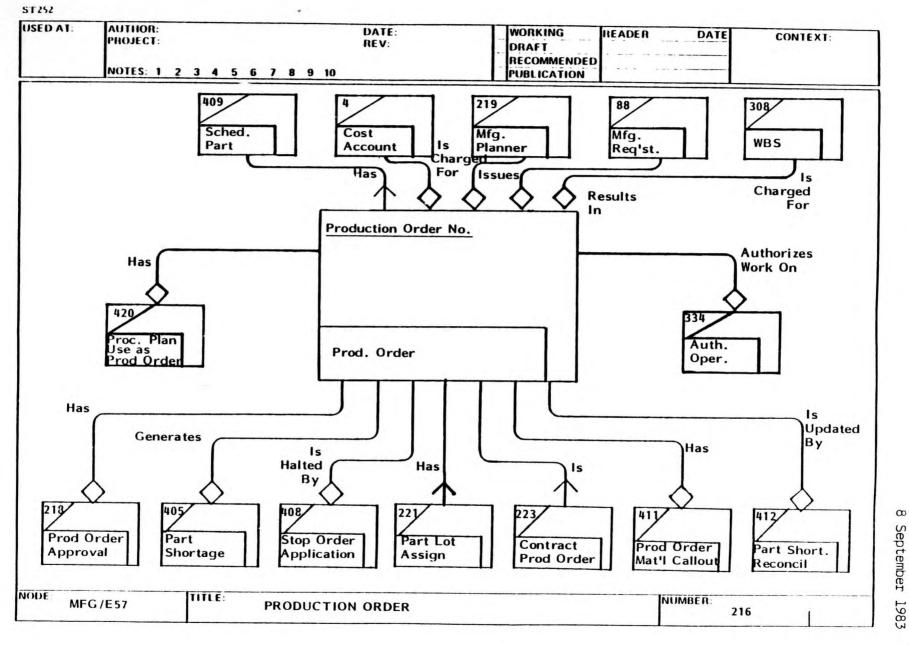
Entity Class Definition: A uniquely identifiable instance of a specific type of equipment.

Key Classes: Property No.

Owned Attribute Classes:

| nherited Attribute Class Owned By: | | | Attribute Migration Path | | |
|--|-----------------------|--------------------------------------|--------------------------|--|----------|
| Attribute Class (es) Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; | |
| Organization ID | Organization | 422 | Station | 100 | contains |
| Station No. | Station | 100 | Station | 100 | contains |
| Property No. | Owned Equip. Instance | 260 | Owned Equip. Instance | 260 | is |
| | | | | | |
| | | | | | 0 |
| ODE: MFG/E56 (G1) | TITLE: GLOSSARY: MA | CHINE | | NUMB | ER: 215 |

September 198



Entity Class Definition: Authorization to perform the work specified by the process plan. Production orders represent individual releases of work to the production department, and reflect specific quantities of parts to be produced, material to be consumed, the planned start and completion date, etc.

Key Classes: Production Order No.

Owned Attribute Classes:

Name: Production Order No.

Definition: A number which uniquely identifies an occurrence of a production order.

Name: Production Order Description

Definition: Descriptive information about the order.

Name: Production Order Quantity

Definition: The production quantity originally released.

Name: Ship to Location

Definition: Identification of the location where the allocated quantity has to be moved after completion of the order.

Name: External Priority

Definition: A value, provided by management, which reflects the relative importance of the order.

Name: Production Order Priority

Definition: A calculated value used to rank the order relative to all others. Major factors affecting order priority are:

Number of days delay beyond due date.

Slack between earliest and latest start date.

External priority.

Name: Status Code

Definition: A code denoting the current status, such as:

Planned Released Cancelled

Firm Held up for engineering change Etc.

NODE: MFG/E57 (G1)

GLOSSARY: PRODUCTION ORDER

NUMBÉR:

Owned Attribute Classes: (Continued)

Name: Planned Order Release Date

Definition: Date on which order should be released.

Name: Earliest Start Date

Definition: Earliest date order can be started.

Name: Latest Start Date

Definition: Latest start date consistent with meeting the due date.

Name: Scheduled Due Date

Definition: The date on which the order is scheduled to be completed.

Name: Actual Start Date

Definition: The date the order was actually started.

Name: Actual Completion Date

Definition: The date on which the order was completed.

Name: Standard Material Cost to Date

Definition: The accumulation of the standard costs for the material used in the order.

Name: Actual Material Cost to Date

Definition: The actual material cost incurred for the completed operations.

Name: Standard Labor Cost to Date

Definition: The sum of the standard labor costs of completed operations.

Name: Actual Labor Cost to Date

Definition: The actual labor cost incurred for the completed operations.

Name: Standard Machine Hours to Date

Definition: The sum of standard machine hours for all completed operations.

NODE:

MFG/E57 (G2)

TITLE:

GLOSSARY: PRODUCTION ORDER (Continued)

NUMBER:

Name: Actual Machine Hours to Date

Definition: The actual machine hours for all completed operations.

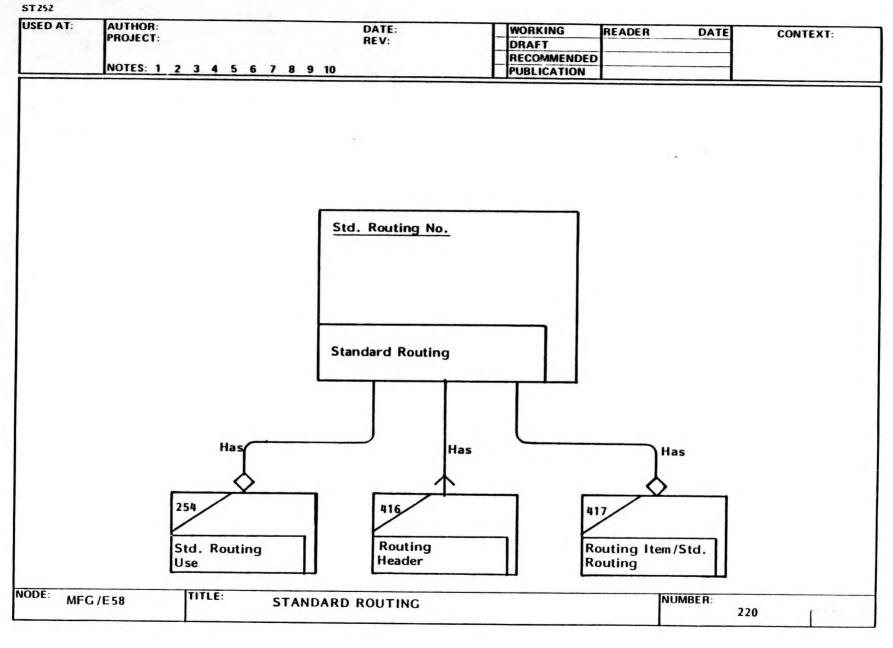
Name: Standard Labor Hours to Date

Definition: The sum of the standard labor hours for completed operations.

Name: Actual Labor Hours to Date

Definition: The actual labor hours for completed operations.

| Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|---|--|--|--|
| | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Cost Account | 4 | Cost Account | 4 | is charged for |
| Part | 6 | Scheduled Part | 409 | has |
| Mfg. Request | 88 | Mfg. Request | 88 | results in |
| Mfg. Planner | 219 | Mfg. Planner | 219 | issues |
| Scheduled Part | 409 | Scheduled Part | 409 | has |
| Scheduled Part | 409 | Scheduled Part | 409 | has |
| Work Breakdown Structure | 308 | Work Breakdown Struct | . 308 | is charged for |
| | Entity Class Name Cost Account Part Mfg. Request Mfg. Planner Scheduled Part Scheduled Part | Entity Class Name Cost Account Part Mfg. Request Mfg. Planner Scheduled Part Scheduled Part 409 | Attribute Class Owned By: Entity Class Name Number Inherited From: Entity Class Name Cost Account Part 6 Scheduled Part Mfg. Request Mfg. Planner Scheduled Part 409 Scheduled Part Scheduled Part Scheduled Part Scheduled Part Scheduled Part Scheduled Part Scheduled Part | Attribute Class Owned By: Entity Class Name Number Inherited From: Entity Class Name Number Cost Account 4 Cost Account 4 Part 6 Scheduled Part 409 Mfg. Request Mfg. Planner 219 Mfg. Planner Scheduled Part 409 Scheduled Part 409 Scheduled Part 409 Scheduled Part 409 Scheduled Part 409 |



Entity Class Definition: Represents a uniquely identifiable series of processes, which are intended for performance

in a predetermined sequence, involving one or more work stations, and which may be used

for the production of one or more parts.

Key Classes: Standard Routing No.

Owned Attribute Classes:

Name: Standard Routing No.

TITLE:

MFG/E58 (G1)

Definition: A number which uniquely identifies a standard routing.

| | | | Attribute Migration Path | | |
|--|--|--------|--------------------------------------|--------|--|
| | Attribute Class Owned By: Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| | | | | | |
| | | | | | |
| | | | | | 1 |
| | | |))-) | | |
| | | | | [NUM | |

GLOSSARY: STANDARD ROUTING

3-83

NODE:

FTR110410000U September 1983

OPERATION STANDARD

 ∞ FTR110410000U 3 September 1983

NUMBER:

224

MFG/E63

ST 252 USED AT:

| 14 | |
|----|--|
| ĭ | |
| 00 | |
| | |

225

Entity Class Definition: Reflects the amount of time allowed as a standard for the performance of the work defined by a specific routing item.

Key Classes: Process Plan No., Line No.

Owned Attribute Classes:

Name:

Definition:

| - 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | Attribute Class Owned By: | | Attribute Migration Path | | |
|--|---------------------------|---------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Process Plan No. | Process Plan | 415 | Planned Mfg. Operation | 421 | has |
| Line No. | Planned Mfg. Operation | 421 | Planned Mfg. Operation | 421 | has |
| | | | | | |
| ODE: MFG/E63 (G1) | TITLE: GLOSSARY: OP | ERATION | STANDARD | NUMB | SER: |

OPERATOR STATION ASSIGNMENT

ST252 USED AT

MFG/E66

FTR110410000U September 1983

NUMBER:

3-87

Entity Class Definition: The assignment of a specific operator to a specific station.

Key Classes: Operator No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------|---------------------------|----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Operator No. | Operator | 53 | Operator | 53 | is currently assigned to |
| Station No. | Station | 100 | Station | 100 | is used as |
| Organization ID | Organization | 422 | Station | 100 | is used as |
| NODE: MFG/E66 (G1) | TITLE: GLOSSARY: OPE | ERATOR S | TATION ASSIGN. | NUME | BER: 227 |

FTR110410000U 8 September 1983

Key Classes: Contract No., End Item Serial No., Bill of Material Item No., Part No.

Owned Attribute Classes:

Name: Bill of Material Item No.

Definition: A number serially assigned to each item of an end item bill of material.

| Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|-----------------------------------|---|---|---|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part | 6 | Part | 6 | is specified by |
| Sales Contract | 81 | Engineering Bill of Material | 118 | is made up of |
| End Item | 5 | Engineering Bill of Material | 118 | is made up of |
| Part | 6 | Engineering Bill of Material | 118 | is made up of |
| Turi c | | | INLIME | AÉ B. |
| | Part Sales Contract End Item Part | Entity Class Name Part 6 Sales Contract 81 End Item 5 Part 6 | Attribute Class Owned By: Entity Class Name Part Sales Contract End Item Sales Contract End Item Sales Contract Sales Contract End Item Sales Contract End Item Sales Contract Engineering Bill of Material Engineering Bill of Material Engineering Bill of Material Engineering Bill of Material | Attribute Class Owned By: Entity Class Name Number Inherited From: Entity Class Name Number Part 6 Part 6 Part 6 Sales Contract 81 Engineering Bill of Material End Item 5 Engineering Bill of Material Part 6 Engineering Bill of Material Part 6 Engineering Bill of Material |

3-80

FIRIIO410000 September 198

ST 252

FTR110410000U September 1983

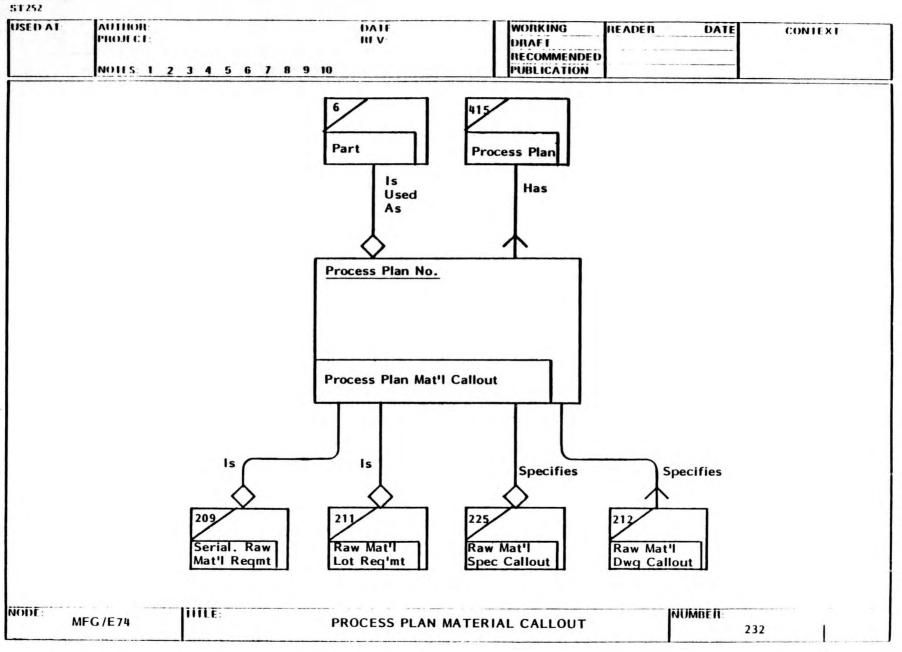
 ∞

3-91

FTR110410000U 8 September 1983

| Entity Class Definition: Authorization for the use of specific engineering documents by the factory. | |
|--|--|
| Key Classes: Engineering Order No. | |
| Owned Attribute Classes: | |

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Engineering Order No. | Engineering Order | 333 | Approved Engineering Order | 361 | is |
| | | | | | |
| DE: MFG/E69 (G1) | TITLE: GLOSSARY: ENG | INFERING | RELEASE | NUMB | ÉR: |



| Ì | ١ | | , | J |
|---|---|---|---|---|
| | | i | | |
| | ١ | ų | (|) |
| | ۱ | | | J |

233

Entity Class Definition: An occurrence of a specific requirement for raw material; i.e., material in an 'as purchased' condition which requires modification.

Key Classes: Process Plan No.

Owned Attribute Classes:

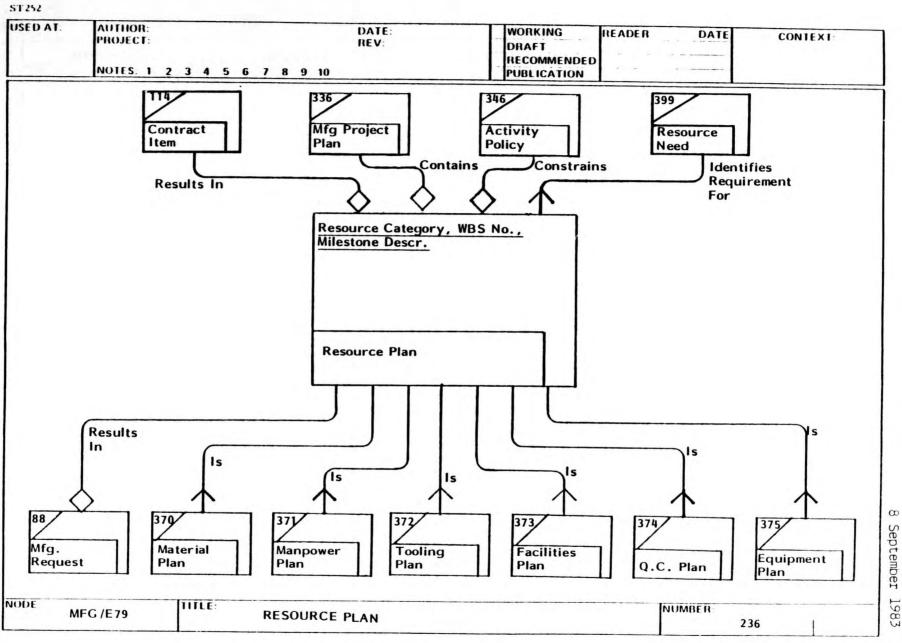
Name:

Definition:

MFG/E74 (G1)

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|-----------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | is used as |
| Process Plan No. | Process Plan | 415 | Process Plan | 415 | has |
| | | | | | |
| ODE: MEG/E7# (C.1) | TITLE: GLOSSARY: PRO | CESS DI A | N MATERIAL CALLOUT | . NUMB | ER: |

GLOSSARY: PROCESS PLAN MATERIAL CALLOUT



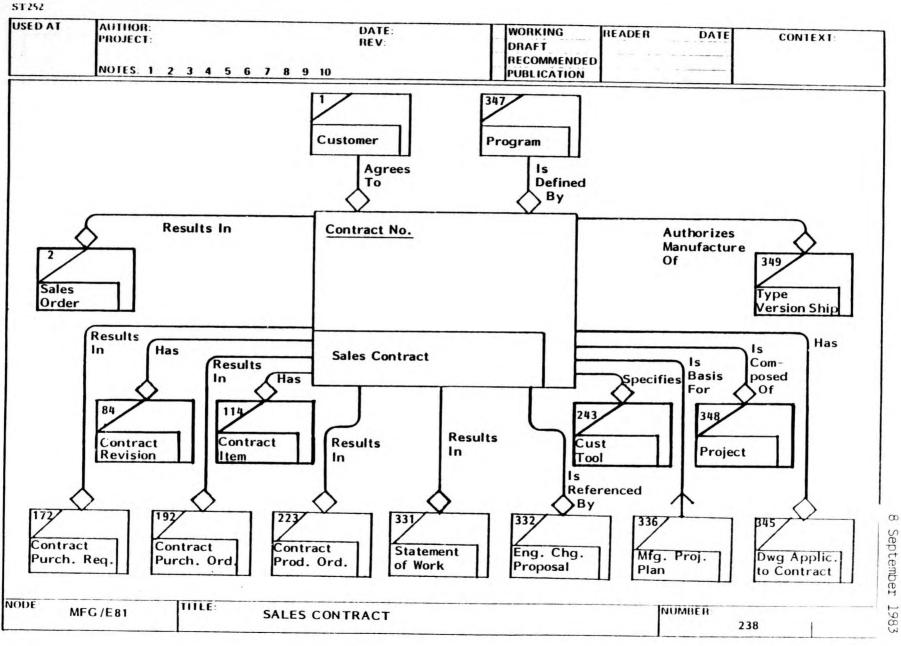
Entity Class Definition: A detailed plan for the use of specific resources which are necessary to fill contractual

obligations.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Contract No. | Sales Contract | 81 | Contract Item | 114 | results in |
| Contract Item No. | Contract Item | 114 | Contract Item | 114 | results in |
| Resource Category | Resource Need | 399 | Resource Need | 399 | identifies rqmt. for |
| WBS No. | Work Breakdown Structure | 308 | Resource Need | 399 | identifies rqmt. for |
| Milestone Descrip. | Milestone | 353 | Resource Need | 399 | identifies rqmt. for |
| Contract No. | Sales Contract | 81 | MFG Project Plan | 336 | contains |
| Contract No. | Sales Contract | 81 | Activity Policy | 346 | constrains |
| Change No. | Statement of Work | 331 | Activity Policy | 346 | constrains |
| Activity Name | Activity Policy | 346 | Activity Policy | 346 | constrains |
| ODE: MFG/E79 (G1) | TITLE: GLOSSARY: RES | OURCE PI | _AN | NUME | ВЕЯ: 237 |



Entity Class Definition: An agreement between the company and one of its customers for the provision of specified products and/or services by the company in return for compensation from the customer

per mutually agreeable terms and conditions.

Entity Class Synonyms: Contract

Key Classes: Contract Number

Owned Attribute Classes:

Name: Contract Number

Definition: A unique identifier assigned to an agreement with a customer.

Name: Model

Definition: The alphanumeric code that uniquely identifies the customer variations to the specific project

aircraft.

Name: Contract Type

Definition: The alphanumeric code that identifies the category to which a contract belongs.

Name: Contract Date

Definition: The calendar date related to a specific aspect of the contract.

Name: Subject

Definition: A brief statement of the nature of the contract.

Name: Contract Name

Definition: The name of a contract, usually coinciding with the product to be delivered.

Name: Contract Approval Date

Definition: The date of the acceptance of the terms of the contract by both the supplier and the

customer.

Name: Contract Delivery Rate

Definition: The number of units per designated period of time that are to be delivered to the

customer.

NODE: MFG/E81 (G1)

TITLE:

GLOSSARY: SALES CONTRACT

NUMBER:

239/240

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|---------|--------------------------------------|--------|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Customer No. | Customer | 1 | Customer | 1 | issues |
| Program Name | Program | 347 | Program | 347 | is defined by |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | h | | | | |
| | | | | | |
| DE: MFG/E81 (G2) | TITLE: GLOSSARY: SALI | S CONTO | ACT | NUMB | ÉR: 241 |

Entity Class Definition: A modification to the wording of a contract, which may affect the product and/or services

ordered, terms and conditions of sale, etc.

Key Classes: Contract No., Contract Revision No.

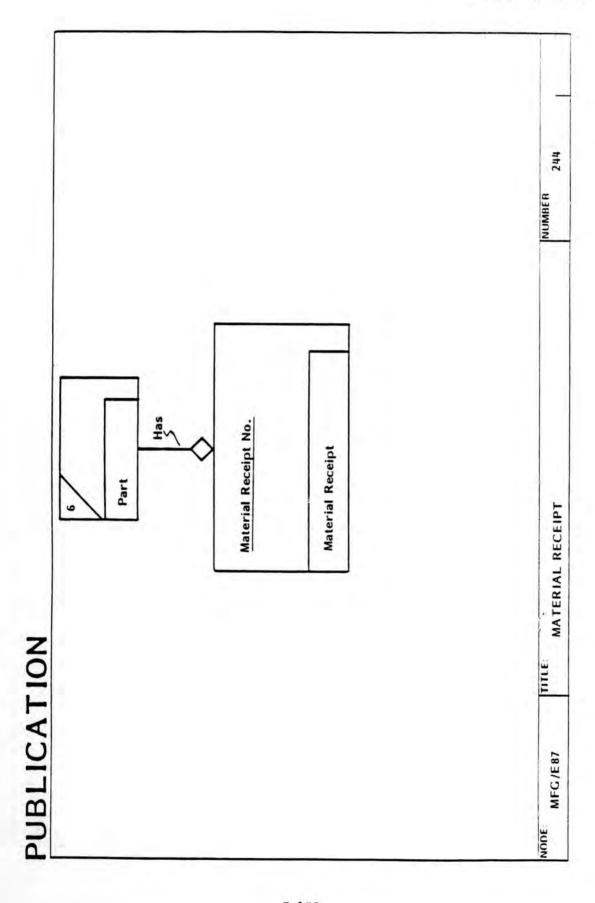
Owned Attribute Classes:

Name: Contract Revision No.

Definition: A unique number assigned to each contract revision.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | has |
| | | | | | |
| IODE: MFG/E84 (G1) | TITLE: GLOSSARY: CO | NTRACT F | REVISION | NUME | DÉR: 243 |

FTR110410000U September 1983



Entity Class Definition: A uniquely identifiable occurrence of a single quantity of a specific part having been received into inventory.

Key Classes: Material Receipt No.

Owned Attribute Classes:

Name: Material Receipt No.

Definition: A unique number assigned to each material receipt.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|-----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | has |
| | | | | | |
| NODE: MFG/E87 (G1) | TITLE: GLOSSARY: MAT | FERIAL RI | ECEIPT | NUMB | ER: 245 |

Entity Class Definition: A request for the production of a specific quantity of a specific part.

Key Classes: Manufacture Request No.

Owned Attribute Classes:

Name: Manufacture Request No.

Definition: A number which uniquely identifies an occurrence of a manufacture request.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | is requested by |
| Resource Category | Resource Need | 399 | Resource Plan | 79 | results in |
| WBS No. | Work Breakdown Structure | 308 | Resource Plan | 79 | results in |
| Milestone Descrip. | Milestone | 353 | Resource Plan | 79 | results in |
| | | | | | |
| IODE: MFG/E88 (G1) | TITLE: GLOSSARY: MAN | NUFACTU | RE REQUEST | NUMB | ÉR: 247 |

September 198

NUMBER Material Issue No. Material Issue MATERIAL ISSUE **PUBLICATION** TITLE MFG/E89 NODE

Entity Class Definition: A uniquely identifiable occurrence of a single quantity of a specific part having been withdrawn from inventory.

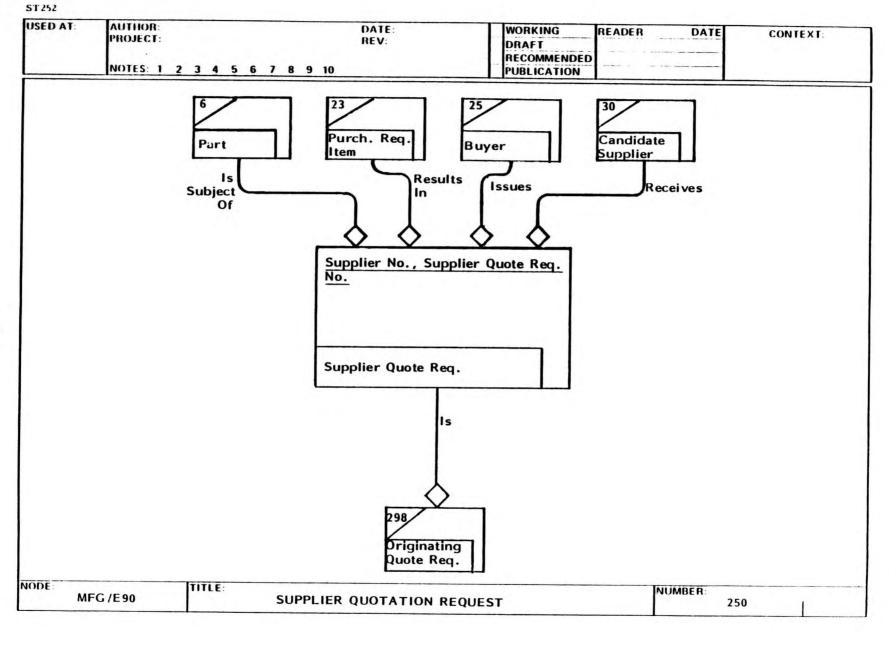
Key Classes: Material Issue No.

Owned Attribute Classes:

Name: Material Issue No.

Definition: A unique number assigned to each material issue.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|-----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | has |
| | | | | | |
| NODE: MFG/E89 (G1) | TITLE: GLOSSARY: MAT | TERIAL IS | SSUE | NUME | DÉR: 249 |



Entity Class Definition: A request made by a buyer to a supplier for a price and delivery commitment by the supplier for specific products and/or services.

Key Classes: Supplier Quotation Request No., Supplier No.

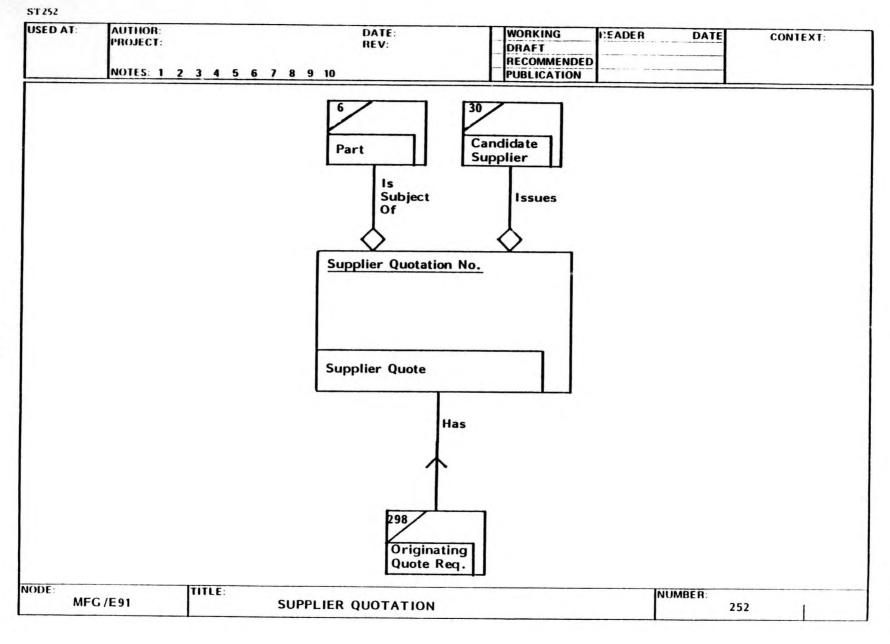
Owned Attribute Classes:

Name: Supplier Quotation Request No.

Definition: A unique number assigned to each supplier quotation request.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|-----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | is subject of |
| Purchase Req. No. | Purchase Request | 22 | Purchase Request Item | 23 | results in |
| Purch. Req. Item No. | Purchase Request Item | 23 | Purchase Request Item | 23 | results in |
| Buyer No. | Buyer | 25 | Buyer | 25 | issues |
| Supplier No. | Candidate Supplier | 30 | Candidate Supplier | 30 | receives |
| IODE: MFG/E90 (G1) | TITLE: GLOSSARY: SUF | PPLIER OU | OTATION REQUEST | NUMB | ER: 251 |

FTR110410000U September 1983



Entity Class Definition: A commitment made by a supplier, usually in response to a request from a buyer, indicating price and delivery which he is willing to provide on specified products

and/or services.

Key Classes: Supplier Quotation No.

Owned Attribute Classes:

Name: Supplier Quotation No.

Definition: A unique number assigned to each supplier quotation.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|-----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part No. | Part | 6 | Part | 6 | is subject of |
| Supplier No. | Candidate Supplier | 30 | Candidate Supplier | 30 | issues |
| | | | | 4h | 1 |
| | | | | 4 | 1 p 1 |
| | | | | 1 | |
| | | | | | |
| MFG/E91 (G1) | TITLE: GLOSSARY: SUP | PPLIER QU | I | NUMB | 253 (253) |

FTR110410000U September 1983

\$1252

FTR110410000U 8 September 1983

Entity Class Definition: Objective evidence, resulting from some form of inspection, which indicates the degree to

which the subject of the inspection conforms to the applicable specification(s).

Key Classes: Conformance Certification No.

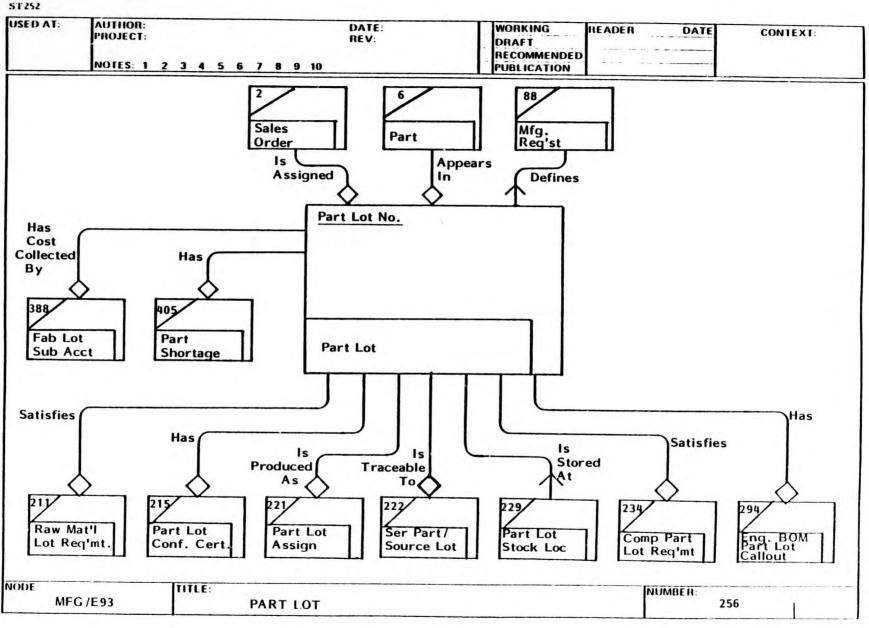
Owned Attribute Classes:

Name: Conformance Certification No.

Definition: A unique number assigned to each conformance certification.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Inspector No. | Inspector | 214 | Inspector | 214 | issues |
| | | | | | |
| NODE: MFG/F92 (G1) | TITLE: GLOSSARY: CON | IFORMANO | CE CERTIFICATION | NUME | ÉR: 255 |

FTR110410000U September 1983



Entity Class Definition: A uniquely identifiable quantity of specific part traceable as a group from a procurement

and/or through manufacturing.

Entity Class Synonyms: J.ot, Batch, Fabrication Lot

Key Classes: Part Lot No.

Owned Attribute Classes:

Name: Part Lot No.

Definition: The unique number serially assigned to each lot.

Name: Part Lot Size

Definition: The number of ship-sets per part type assigned to a given part lot.

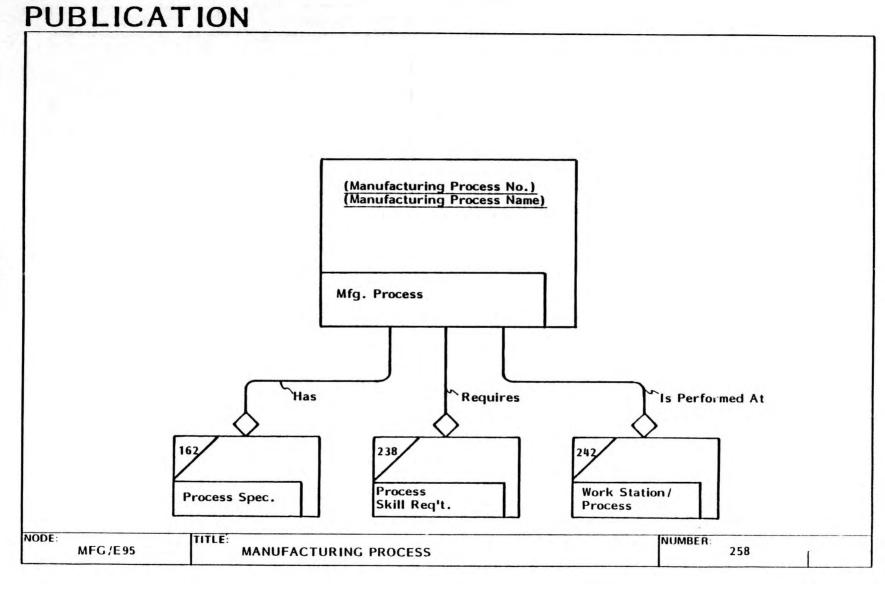
Name: Part Lot In-Work Date

Definition: The scheduled date on which a given part lot is planned to start work.

Name: Part Lot Completion Date

Definition: The scheduled date on which work on a given part lot is planned to be completed.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|--|---------|--------------------------------------|---------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. Mfg. Request No. Sales Order ID | Part Mfg. Request Sales Order | 6 88 | Part Mfg. Request | 6 88 | appears as defines |
| 55.F | | 2 | Sales Order | 2 | is assigned |
| ODE: MFG/E93 (G1) | GLOSSARY: PAR | T LOT | | NUMBE | R: 257 |



 ∞

Entity Class Definition: Generic activity required to produce parts, such as press, plate, weld, drill, paint, assemble, etc.

Key Classes: (Manufacturing Process No.)
(Manufacturing Process Name)

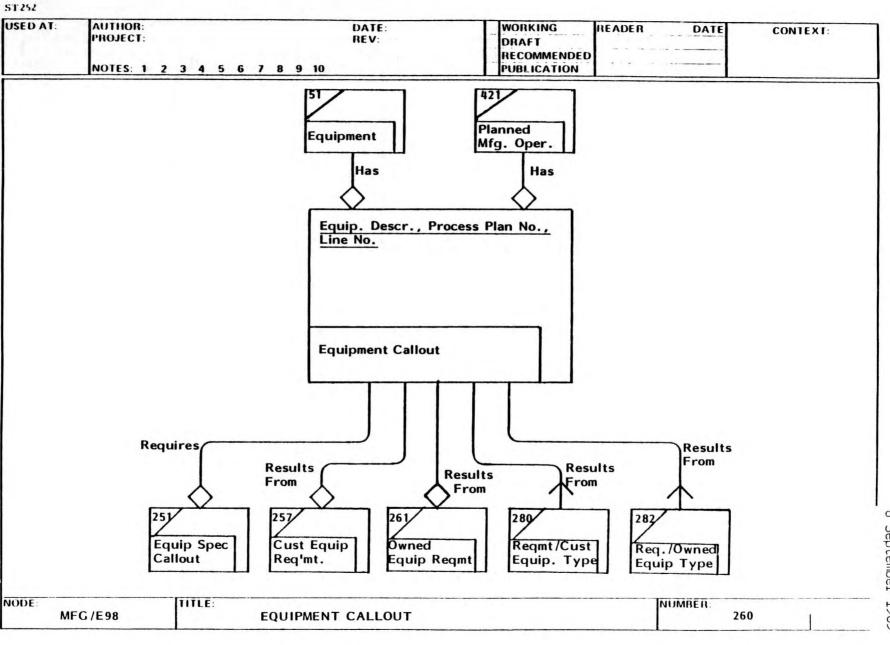
Owned Attribute Classes:

Name: Manufacturing Process No.

Definition: A number which uniquely identifies a manufacturing process.

Name: Manufacturing Process Name
Definition: A name which uniquely identifies a manufacturing process.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------------|---------------------------|--------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | ł, |
| | | | | | |
| | | | | | |
| ODE: MFG/E95 (G1) | TITLE: GLOSSARY: MA | MEACTU | RING PROCESS | NUME | BÉR: 259 |



| W |
|---|
| ī |
| i |
| |
| |

Entity Class Definition: The requirement for a specific type of equipment which must be used in the performance of work defined by a specific planned manufacturing operation.

Key Classes: Process Plan No., Line No., Equipment Description

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By | | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | Attribute Class Owned By: Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Equipment Descrip. | Equipment | 51 | Equipment | 51 | has |
| Line No. | Planned MFG Operation | 421 | Planned MFG Operation | 421 | has |
| Process Plan No. | Process Plan | 415 | Planned MFG Operation | 421 | has |
| | | | | | |
| | | | | | |
| NODE: MFG/E98 (G1) | TITLE: GLOSSARY: EQU | IPMENT C | ALLOUT | NUME | BER: 261 |

FTR110410000U September 1983

 ∞

Entity Class Definition: An area within an organization with one or more machines and/or employees assigned to

a specific task.

Entity Class Synonyms: Task Center, Work Station

Key Classes: Organization ID, Station No.

Owned Attribute Classes:

Name: Station Function

Definition: A description of the work station function.

Name: Station Location

Definition: That portion of a building assigned to a given station.

Name: Station No.

Definition: The identifier of an area of the plant where work is performed or where machinery resides.

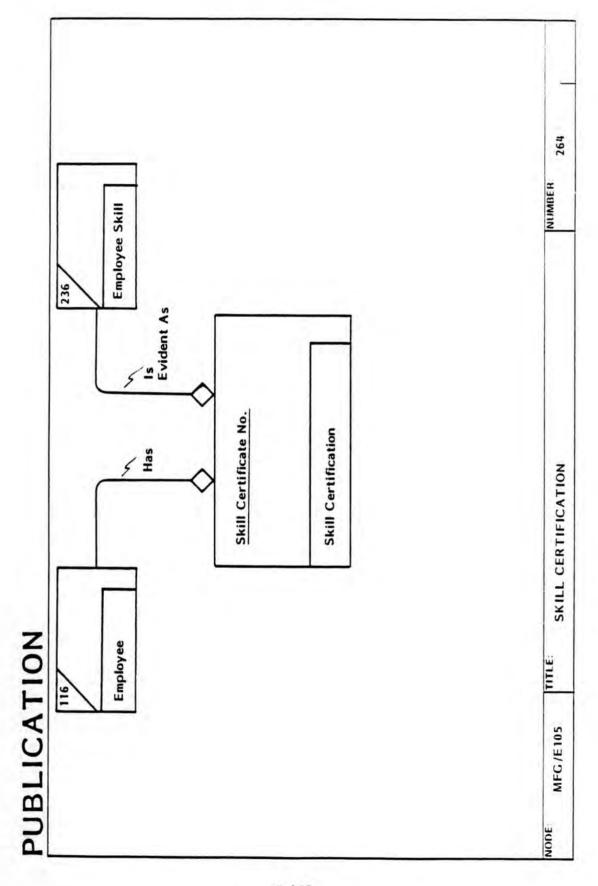
Name: Station Nomenclature

Definition: A description of the specific functions and activities performed at a given station.

Name: Station Crew-Size

Definition: The number of people required for optimal performance of the work assigned to a station.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|--------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Organization ID | Organization | 422 | Organization | 422 | is comprised of |
| NODE: MFG/E100 (G1) | TITLE: GLOSSARY: STAT | TION | | NUMBÉ | R: 263 |



3-123

Entity Class Definition: Objective evidence that an individual employee has demonstrated an ability to perform

a particular skill.

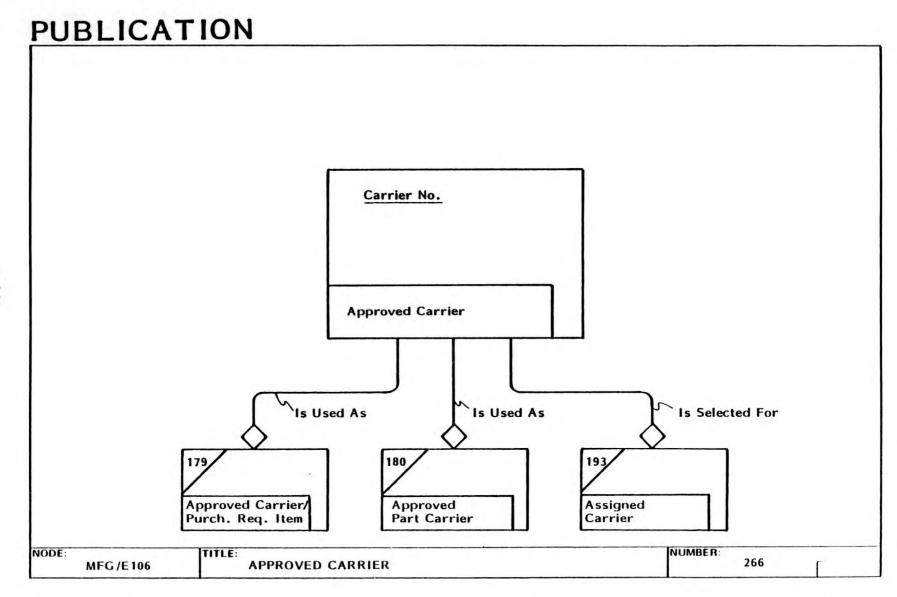
Key Classes: Skill Certificate No.

Owned Attribute Classes:

Name: Skill Certificate No.

Definition: A unique number assigned to each skill certificate.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | has |
| Skill Classification | Employee Skill | 236 | Employee Skill | 236 | is evident as |
| | | | | | |
| | The state of the s | | | | |
| | , | | | | |
| ODE: | TITLE: GLOSSARY: SKIL | | | NUMB | |
| MFG/E105 (G1) | GEOSSAKT: SKIL | L CERTIF | ICATION | | 265 |



3-125

FTR110410000U September 1983

Entity Class Definition: A person or persons from whom the company may agree to secure transportation

Key Classes: Carrier No.

Owned Attribute Classes:

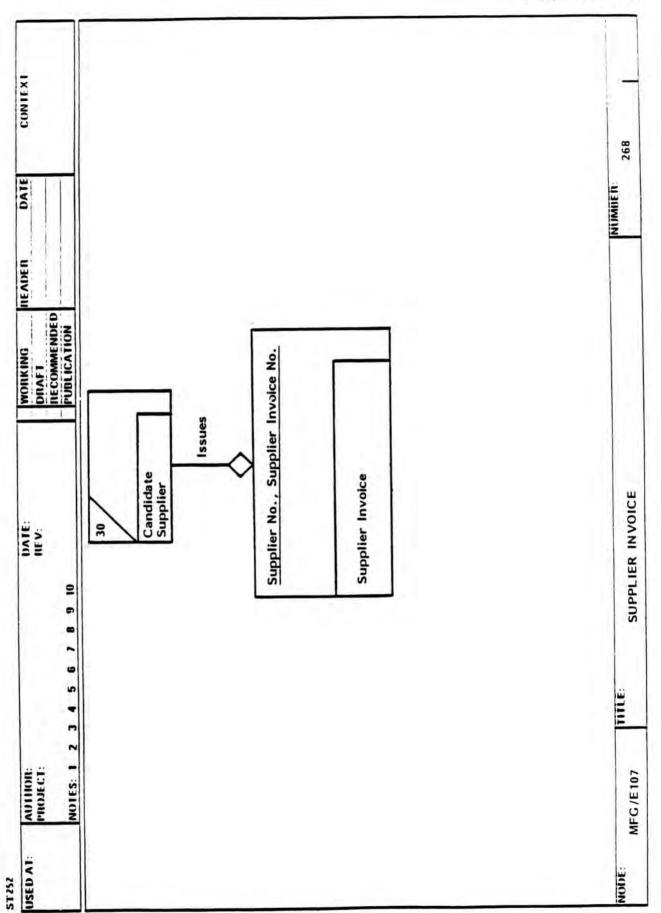
Name: Carrier No.

Definition: A unique number assigned to each carrier.

Name: Carrier Name

Definition: The name by which a carrier is known.

| Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|-------------------|--------------------------------------|--|--|
| | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | |
| | | | | |
| | | | | |
| | | | 144 | |
| | | | | |
| | | | | l |
| Turi e | | | INUIMO | ÉD. |
| | Entity Class Name | Entity Class Name Number | Entity Class Name Number Inherited From: Entity Class Name | Entity Class Name Number Inherited From: Entity Class Name Number |



3-127

Entity Class Definition: A statement of charges; i.e., a demand for payment, issued to the company by a supplier for products and/or services delivered.

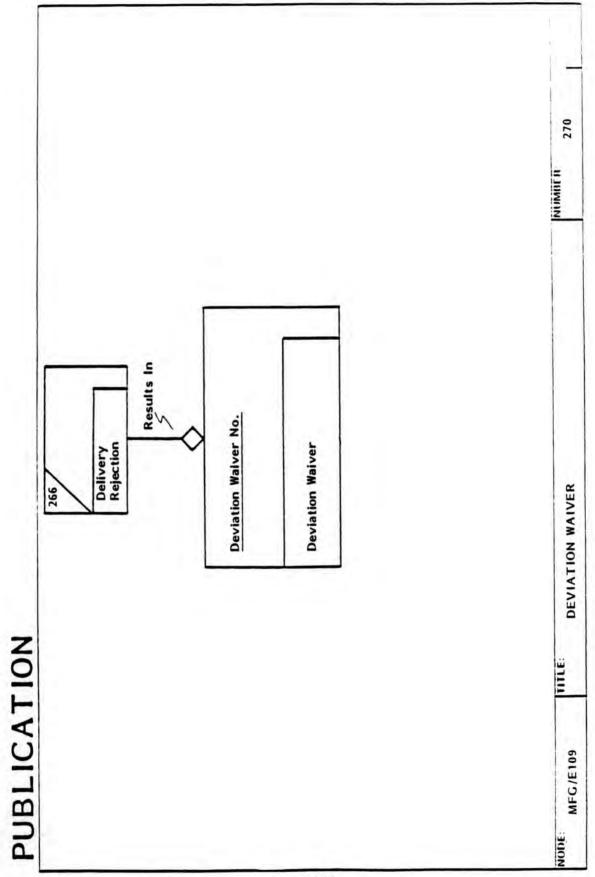
Key Classes: Supplier No., Supplier Invoice No.

Owned Attribute Classes:

Name: Supplier Invoice No.

Definition: A unique number assigned to each invoice.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Supplier No. | Candidate Supplier | 30 | Candidate Supplier | 30 | issues |
| ODE: MFG/E107 (G1) | TITLE: GLOSSARY: SUP | PLIER IN | /OICE | INUMB | ER: |



Entity Class Definition: Authorization for the factory to use an instance of a part which exhibits minor deviations from the corresponding specification.

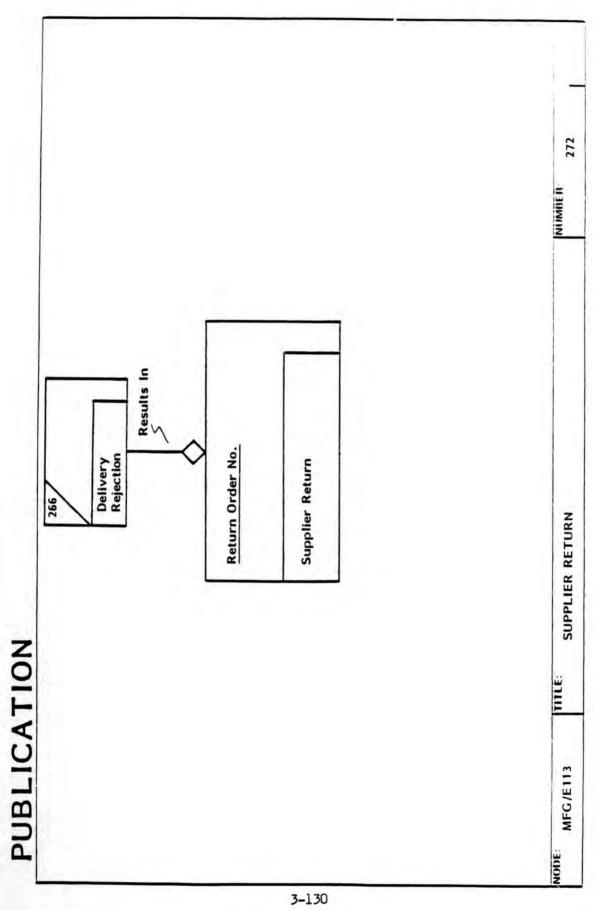
Key Classes: Deviation Waiver No.

Owned Attribute Classes:

Name: Deviation Waiver No.

Definition: A unique number assigned to each deviation waiver.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attril | ute Migration Path | |
|-------------------------------|--|----------|--------------------------------------|--------------------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Receiving Report No. | Supplier Delivery | 32 | Delivery Rejection | 266 | results in |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Delivery Rejection | 266 | results in |
| | | | | | |
| | | | | | |
| ODE: MFG/E109 (G1) | TITLE: GLOSSARY: DEVI | ATION WA | AIVER | NUMB | ER: 271 |



Entity Class Definition: A uniquely identifiable quantity of a specific product which is returned to the vendor, or services which are rejected by the company, and for which no payment will be

made by the company.

Key Classes: Return Order No.

Owned Attribute Classes:

Name: Return Order No.

Definition: A unique number assigned to each authorization for the return of rejected items to the

originating supplier.

| | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Receiving Report No. | Supplier Delivery | 32 | Delivery Rejection | 266 | results in |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Delivery Rejection | 266 | results in |
| | | | | | |
| MFG/E113 (G1) | TITLE: GLOSSARY: SUP | PLIER RE | I ΓURN | NUME | BER: 273 |

FTR110410000U 8 September 1983

Entity Class Definition: A uniquely identifiable occurrence of a deliverable contract requirement.

Entity Class Synonyms: Contract Requirement

Key Classes: Contract No., Contract Item No.

Owned Attribute Classes:

Name: Contract Item No.

Definition: A unique number assigned to each item of a contract.

Name: Contract Requirement Effective Date Definition: The calendar date of a milestone of accomplishment stipulated in the contract requirements statement.

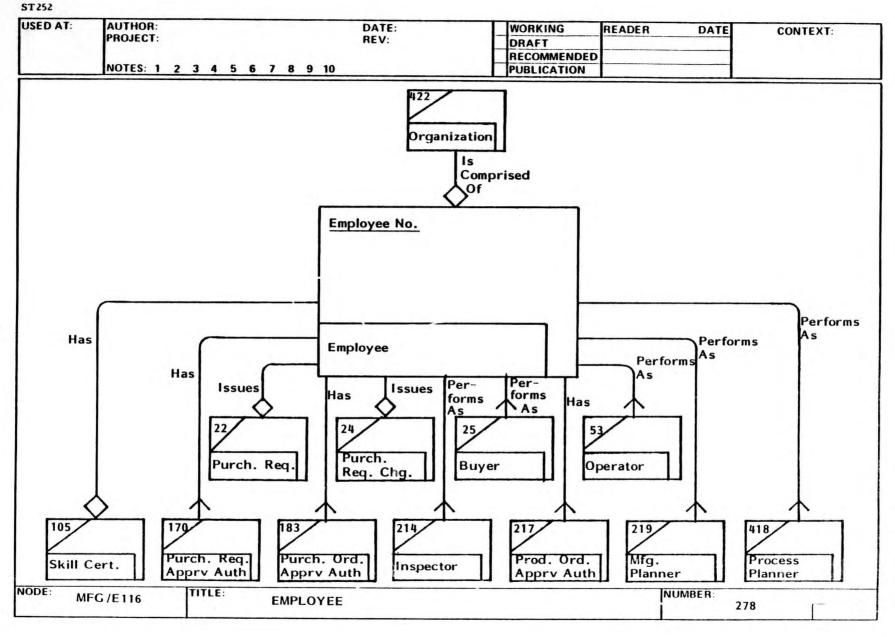
Name: Number of Ships

Definition: The specific quantity of aircraft impacted by the conditions of the contract.

Name: Technical Requirement

Definition: A scientific or engineering condition which must be met or maintained during the manufacturing

| Inherited Attribute Class Owned Inherited Entity Class Name | Attribute Class Owned By | | Attribute Migration Path | | |
|---|--------------------------|--------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | has |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E114 (G1) | TITLE: GLOSSARY: CO | NTRACT | I | NUME | BER: 275 |



FTR110410000U September 1983

 ∞

Entity Class Definition: A person that works for the company, is on the company payroll, and is identified by an employee number.

Key Classes: Employee No.

Owned Attribute Classes:

Name: Employee No.

Definition: A unique number identifying the employee.

Name: Employee Name

Definition: Full legal name of the employee.

Name: Academic Qualification

Definition: The academic degrees obtained.

Name: Employee Sex

Definition: A code to indicate male or female.

Name: Shift No.

Definition: Identification of the shift to which the employee is assigned.

Name: Normal Start Time

Definition: The time at which the employee normally starts to work.

Name: Normal Stop Time

Definition: The time at which the employee normally stops working.

Name: Start Date

Definition: The calendar date on which the employee began employment.

Name: Employee Skill Class

Definition: A code which identifies the company recognized capability of the employee.

NODE: MFG/E116 (G1)

TITLE:

GLOSSARY: EMPLOYEE

NUMBER:

279/280

| Attribute Class Owned By Entity Class Name | Attribute Class Owned Ry | | Attribute Migration Path | | |
|--|--------------------------|--------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Organization ID | Organization | 422 | Organization | 422 | has |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| DDE: MFG/E116 (G2) | TITLE: GLOSSARY: EMP | LOYEE | | NUMB | ER: 281 |

FTR110410000U September 1983

Entity Class Definition: Complete listing of all detailed parts, subassemblies, assemblies, which together make up a part, component, or end item.

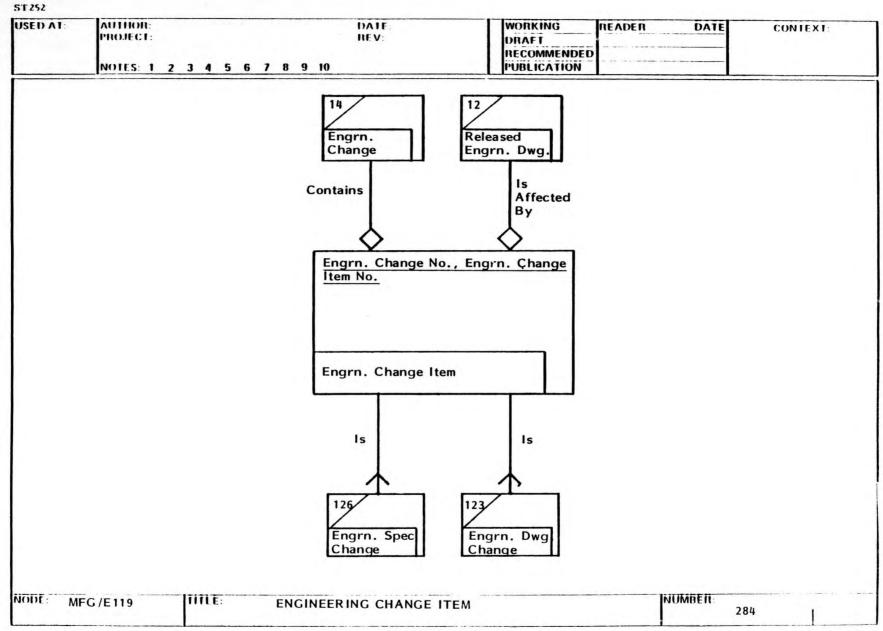
Key Classes: Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Contract No. | Sales Contract | 81 | End Item | 5 | has |
| End Item Carial No. | End Item | 5 | End Item | 5 | has |
| Part No. | Part | 6 | End Item | 5 | has |
| | | | | | |
| | | | | | |
| ODE: MFG/E118 (G1) | TITLE: CLOSSARY, ENC. | INFERING | BILL OF MATERIAL | NUMB | DER: 283 |



Entity Class Diagram: An identifiable item of engineering change which identifies the specific engineering drawing or engineering specification being revised.

Key Classes: Eng. Change No., Eng. Change Item No.

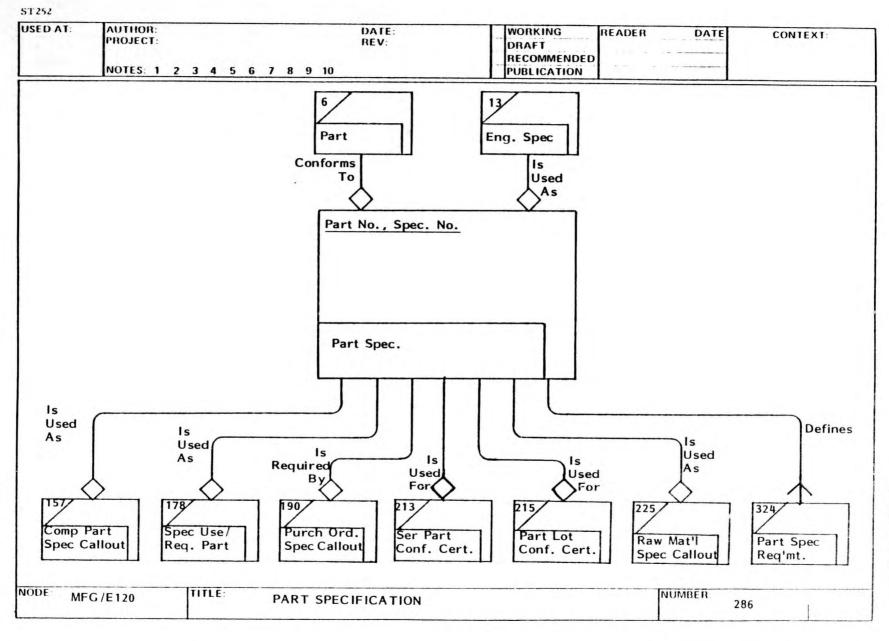
Owned Attribute Classes:

Name: Eng. Change Item No.

Definition: A unique number assigned to each eng. change item.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Eng. Change No. | Eng. Change | 14 | Eng. Change | 14 | contains | |
| Engineering Order No. | Engineering Order | 333 | Released Engr. Drawing | 12 | is defected by | |
| Drawing No. | Drawing | 414 | Released Engr. Drawing | 12 | is defected by | |
| | | | | | | |
| | | | | | | |
| NODE: MFG/E119 (G1) | TITLE: GLOSSARY: ENG | INEERING | CHANGE ITEM | NUME | BÉR: 285 | |

September 198



FTR110410000U 3 September 1983

| | ion: Reflects the application of No., Specification No. | of an engi | neering specification to | a specific pa | art. |
|----------------------------------|--|-------------|--|---------------|--|
| Owned Attribute Cla | THE SECTION OF THE PROPERTY OF THE PERSON OF | | | | |
| Name: | | | | | |
| | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Inherited | Attribute Class Owned Bu | T | Attrib | oute Migratio | n Path |
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | oute Migratio | |
| | | Number 6 | | | n Path Inherited Through: Relation Class Name; conforms to |
| Attribute Class(es) Part No. | Entity Class Name | | Inherited From: Entity Class Name | Number 6 | Inherited Through: Relation Class Name; conforms to |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number | Inherited Through: Relation Class Name; |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name; conforms to |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name; conforms to |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name; conforms to |
| Attribute Class(es) | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name; conforms to |

NODE: MFG/E120 (G1)

TITLE:

GLOSSARY: PART SPECIFICATION

NUMBER:

287

ST252

AUTHOR: PROJECT:

RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 12 Engrn. Change Item Released Eng. Dwg. Is Revised Is Engrn. Order No., Drawing No., Engrn. Change No., Engrn. Change Item No. Engrn. Drawing Change NODE: TITLE: NUMBER: MFG/E123 **ENGINEERING DRAWING CHANGE** 288

DATE:

REV:

WORKING

DRAFT

READER

DATE

CONTEXT:

FTR110410000U September 1983

Entity Class Definition: Reflects the occurrence of a revision to an engineering drawing. Key Classes: Drawing No., Eng. Change No., Eng. Change Item No., Eng. Order No.

Owned Attribute Classes: Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------|---------------------------|-----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | is revised by | |
| Eng. Change No. | Eng. Change | 14 | Eng. Change Item | 119 | is | |
| Eng. Change Item No. | Eng. Change Item | 119 | Eng. Change Item | 119 | is | |
| Eng. Order No. | Engineering Order | 333 | Released Eng. Drawing | 12 | is revised by | |
| | | | | | | |
| IODE: MFG/E123 (G1) | TITLE: GLOSSARY: ENC | SINEERING | DRAWING CHANGE | NUMB | ER: 289 | |

ENGINEERING SPECIFICATION CHANGE

119

NUMBER

290

NODE:

MFG/E126

TITLE:

3-147

Entity Class Definition: Reflects the occurrence of a revision to an engineering specification.

Key Classes: Specification No., Eng. Change No., Eng. Change Item No.

Owned Attribute Classes:

Name:

Definition:

| Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---|---|--|---|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Eng. Specification | 13 | Eng. Specification | 13 | is revised by |
| Eng. Change | 14 | Eng. Change Item | 119 | is |
| Eng. Change Item | 119 | Eng. Change Item | 119 | is |
| | | | | |
| | Eng. Specification Eng. Change Eng. Change Item | Entity Class Name Number Eng. Specification 13 Eng. Change 14 Eng. Change Item 119 | Entity Class Name Eng. Specification Eng. Change Inherited From: Entity Class Name Eng. Specification Eng. Change 14 Eng. Change Item | Entity Class Name Eng. Specification Eng. Change Eng. Change Item Inherited From: Entity Class Name Number Inherited From: Entity Class Name Number Inherited From: Entity Class Name Number 13 Eng. Specification 14 Eng. Change Item 119 Eng. Change Item 119 |

FTR110410000U 3 September 1983

| T 252 | | | | | | |
|---------|------------------------------------|--|--|-----------|--------|---------|
| SED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 | DATE: REV: 6 7 8 9 10 | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT |
| | NOTES: 1 2 3 4 5 | Released Eng. Dwg. Is Used As Engrn. Order No., In Contr. No., End Item BOM Item No., Part Engrn. BOM Draw. | Engrg. BOM Item Specifies Orawing No., m Serial No., No. | | | |
| ODE; MF | G/E130 | ENGINEERING BILL OF MA | TERIAL DRAWING | CALLOUT N | UMBER: |)2 |

Entity Class Definition: A requirement for a specific engineering drawing by a bill of material item.

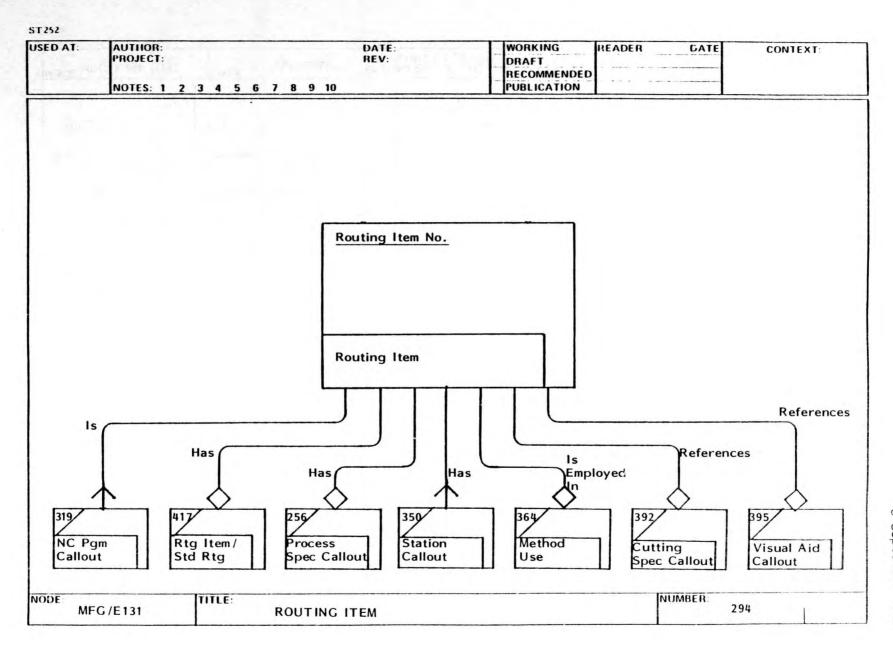
Key Classes: Drawing No., Contract No., End Item Serial No., Bill of Material Item No., Engineering Order No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Drawing No. | Drawing | 14 | Released Eng. Drawing | 12 | is used as |
| Contract No. | Sales Contract | 81 | Engineering BOM Item | 68 | specifies |
| End Item Serial No. | End Item | 5 | Engineering BOM Item | 68 | specifies |
| BOM Item No. | Engineering BOM Item | 68 | Engineering BOM Item | 68 | specifies |
| Engineering Order No. | Engineering Order | 333 | Released Eng. Drawing | 12 | is used as |
| Part No. | Part | 6 | Engineering BOM Item | 68 | specifies |
| ODE: MFG/E130 (G1) | TITLE: GLOSSARY: ENG | INFERING | BILL OF MATERIAL | NUMB | ER: 293 |



FTR110410000U 8 September 1983

Entity Class Definition: A uniquely identifiable step representing a single manufacturing process.

Key Classes: Routing Item No.

Owned Attribute Classes:

Name: Routing Item No.

Definition: A serially assigned number to each item of a standard routing.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|--|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | less: | | | | |
| MFG/E131 (G1) | GLOSSARY: ROU | TING ITE | M | NUMB | 295 |

297

Entity Class Definition: An identifiable element of a sales order, normally used to confirm such things as specific

contractual terms and conditions of sale, products and/or services ordered, delivery

schedules, etc.

Key Classes: Sales Order ID, Sales Order Item No.

Owned Attribute Classes:

Name: Sales Order Item No.

Definition: A unique number assigned to each sales order item.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Sales Order ID | Sales Order | 2 | Sales Order | 2 | contains |
| IODE: MEG /E132 (G1) | TITLE: CLOSSARY, SA | LES OPPE | | [NUME | BÉR: |

NODE: MFG/E132 (G1)

GLOSSARY: SALES ORDER ITEM

ST 252

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING | READER | DATE | CONTEXT: |
|----------|---------------------|---|-------------|--------|--------|----------|
| | | | RECOMMEND | ED | | |
| | NOTES: 1 2 3 4 | 5 6 7 8 9 10 | PUBLICATION | | | |
| | | Engrn. Order No., Engrn. Order No., Engrn. Order No., | Is | | | |
| NODE: | I/E134 | DEEDENGE DE LIVI | | ĮN | UMBER: | |
| WIFG | 7/2134 | REFERENCE DRAWING | | | 298 | В |

FTR110410000U 3 September 1983

 ∞

Entity Class Definition: A drawing which is used as a reference by another drawing.

Key Classes: Drawing No., Drawing No., Engineering Order No., Engineering Order No.

Owned Attribute Classes:

Name:

Definition:

| 이렇게 이번 생각이 되는 생각을 되었다면 보다. | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------|---------------------------|---------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | has |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | is |
| Engineering Order No. | Engineering Order | 333 | Released Eng. No. | 12 | has |
| Engineering Order No. | Engineering Order | 333 | Released Eng. No. | 12 | is |
| IODE: MFG/E134 (G1) | TITLE: CLOSSARY REI | FERENCE | DRAWING | NUME | BÉR: |

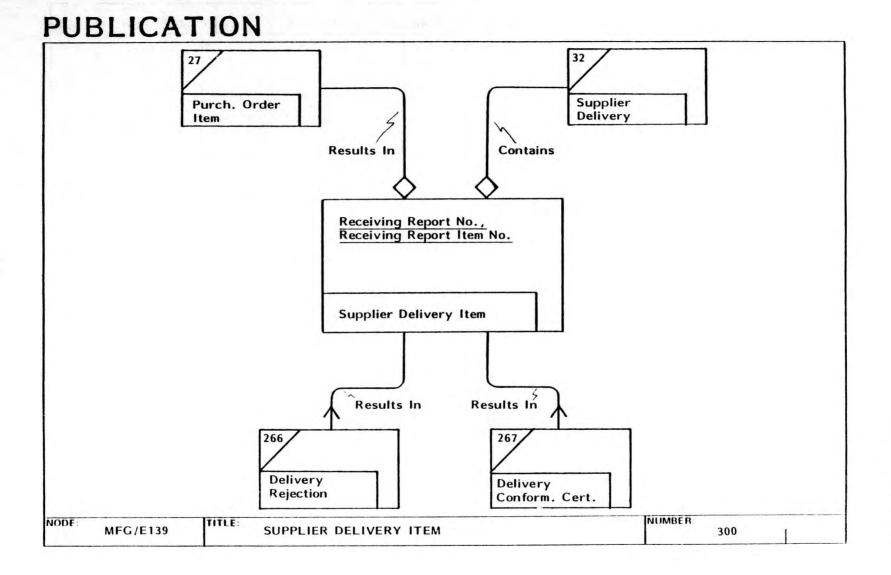
NODE: MFG/E134 (G1)

GLOSSARY:

REFERENCE DRAWING

299





Entity Class Definition: An occurrence of one or more items which are uniquely identified as a single group contained in a supplier delivery, or performance of a specific service in fulfillment of a corresponding

purchase order item.

Key Classes: Receiving Report No., Receiving Report Item No.

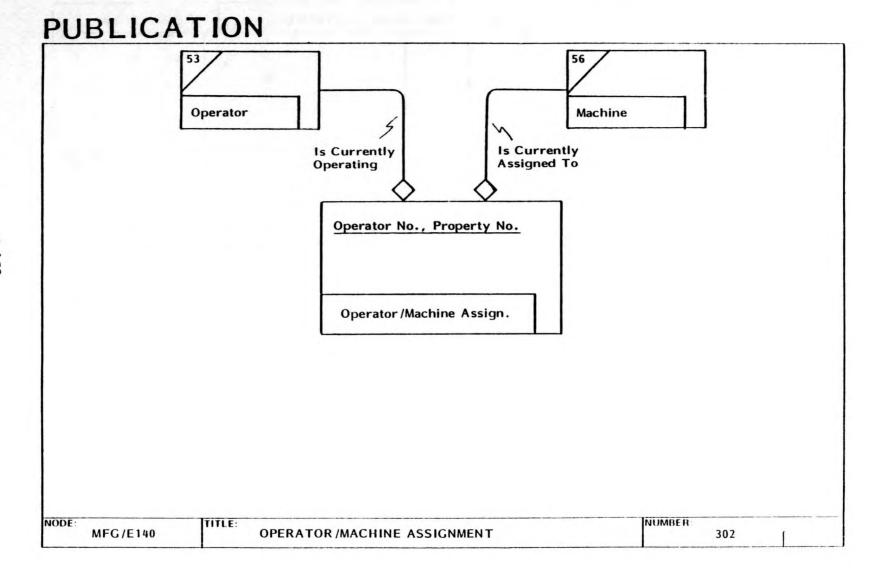
Owned Attribute Classes:

Name: Receiving Report Item No.

Definition: A number, serially assigned to each item on a receiving report.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Purch. Order No. | Purch. Order | 26 | Purch. Order Item | 27 | results in |
| Purch. Order Item No. | Purch. Order Item | 27 | Purch. Order Item | 27 | results in |
| Receiving Report No. | Supplier Delivery | 32 | Supplier Delivery | 32 | contains |
| | | | | | |
| MFG/E139 (G1) | TITLE: GLOSSARY: SUP | PLIER DE | LIVERY ITEM | NUME | DÉR: 301 |

 ∞



| • | | 1 |
|---|---|---|
| ì | í | • |
| ۲ | - | |
| ١ | Į | 1 |

Property No.

NODE: MFG/E140 (G1)

Owned Equip. Instance

TITLE:

| ∞ | |
|----------|-----------------------|
| S | _ |
| 8 | 4 |
| 4 | 70 |
| que | 二 |
| | 5 |
| er | 亡 |
| _ | 8 |
| 6 | $\overline{\bigcirc}$ |
| 83 | 2 |

| | on: Reflects the assignment of | of a specif | ic operator to a specific | c machine. | |
|----------------------------------|--|-------------|--|-------------------------|--|
| | or No., Property No. | | | | |
| Owned Attribute Cla | sses: | | | | |
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Inherited | Attribute Class Owned By. | | Attril | bute Migratio | n Path |
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attril Inherited From: Entity Class Name | bute Migratio Number | n Path Inherited Through: Relation Class Name; |

260

GLOSSARY: OPERATOR/MACHINE ASSIGNMENT

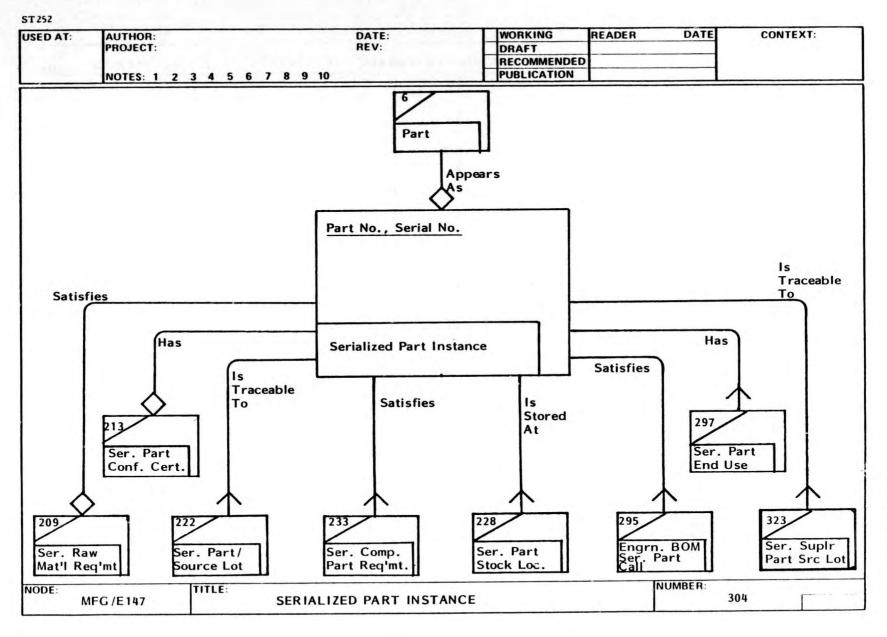
Machine

56

NUMBER:

303

is currently assigned to



FTR110410000U 3 September 1983

 ∞

Entity Class Definition: An instance of a part that is uniquely identifiable from other instances of the same part

by a serial number.

Key Classes: Part No., Serial No.

Owned Attribute Classes:

Name: Serial No.

Definition: A unique number assigned to each serialized part instance.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | appears as |
| ODE: MFG/E147 (G1) | TITLE: GLOSSARY: SERI | ALIZED P | ART INSTANCE | NUMB | ER: 305 |

Entity Class Definition: The occurrence of an engineering drawing specified for a component part by a process plan.

Key Classes: Part No., Drawing No., Process Plan No.

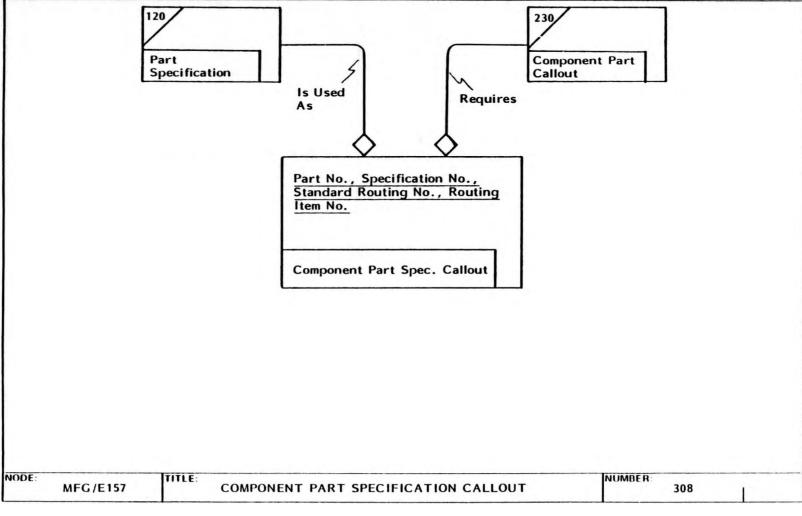
Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|--------|--------------------------------------|--------|---|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part Drawing | 181 | is used as |
| Drawing No. | Released Eng. Drawing | 12 | Part Drawing | 181 | is used as |
| Process Plan No. | Process Plan | 415 | Component Part Callout | 230 | requires |
| Part No. | Part | 6 | Component Part Callout | 230 | requires |
| Eng. Order No. | Engineering Order | 333 | Part Drawing | 181 | is used as |
| IODE: MFG/E153 (G1) | TITLE: 01 000 1011 COM | | PART DRAWING CALLOUT | INUME | SER: |

PUBLICATION 120



Entity Class Definition: An engineering specification which is required for a component part by a routing item.

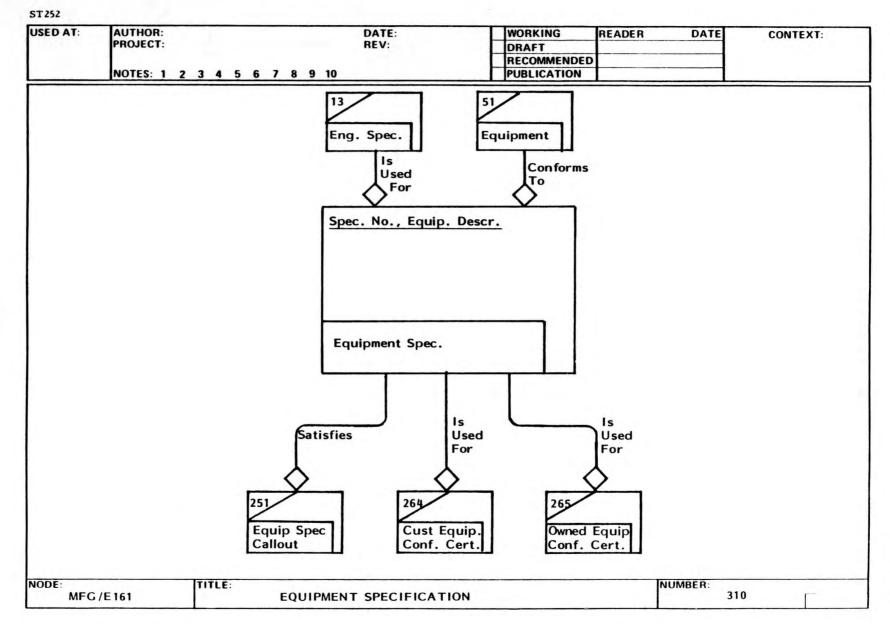
Key Classes: Part No., Specification No., Standard Routing No., Routing Item No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Own Attribute Class(es) Entity Class Name | Attribute Class Owned By: | | Attribute Migration Path | | |
|---|---------------------------|------------------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part Specification | 120 | is used as |
| Specification No. | Eng. Specification | 13 | Part Specification | 120 | is used as |
| Process Plan No. | Process Plan | 415 | Component Part Callout | 230 | requires |
| Part No. | Part | 6 | Component Part Callout | 230 | requires |
| | | | | | |
| IODE: MFG/E157 (G1) | TITLE: GLOSSARY: CON | MPONENT LLOUT | PART SPECIFICATION | NUMB | BER: 309 |



FTR110410000U September 1983

 ∞

311

Entity Class Definition: Reflects the applicability of an engineering specification to a specific equipment type.

Key Classes: Specification No., Equipment Description **Owned Attribute Classes:**

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|-----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | is used as |
| Equip. Description | Equipment | 51 | Equipment | 51 | conforms to |
| | | | | | |
| | | | | 1 | |
| | 17 | | | | |
| | <i>y</i> | | | | |
| ODE: MFG/E161 (G1) | TITLE: GLOSSARY: EQU | JIPMENT S | | INUMB | |

 ∞

Entity Class Definition: Reflects the application of an engineering specification to an individual manufacturing

process.

Entity Class Synonyms: Process Standard

Key Classes: Specification No., Manufacturing Process No.

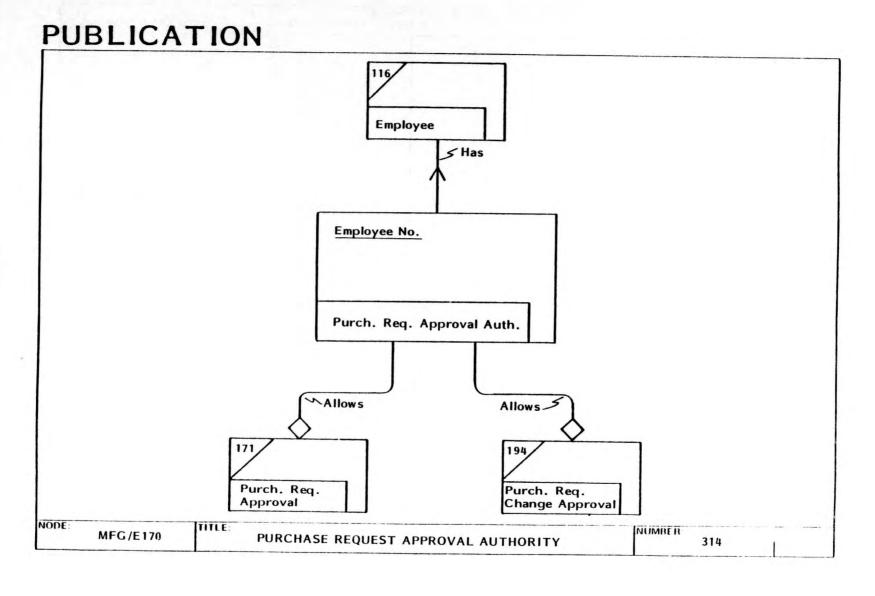
Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Owned B | | | Attribute Migration Path | | |
|-----------------------------------|----------------------|----------------------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | is used as |
| Mfg. Process No. | Mfg. Process | 95 | Mfg. Process | 95 | has |
| | | | | | |
| NODE: MFG/E162 (G1) | TITLE: GLOSSARY: MAI | NUFACTU ECIFICATI | RING PROCESS ON | NUME | BER: 313 |

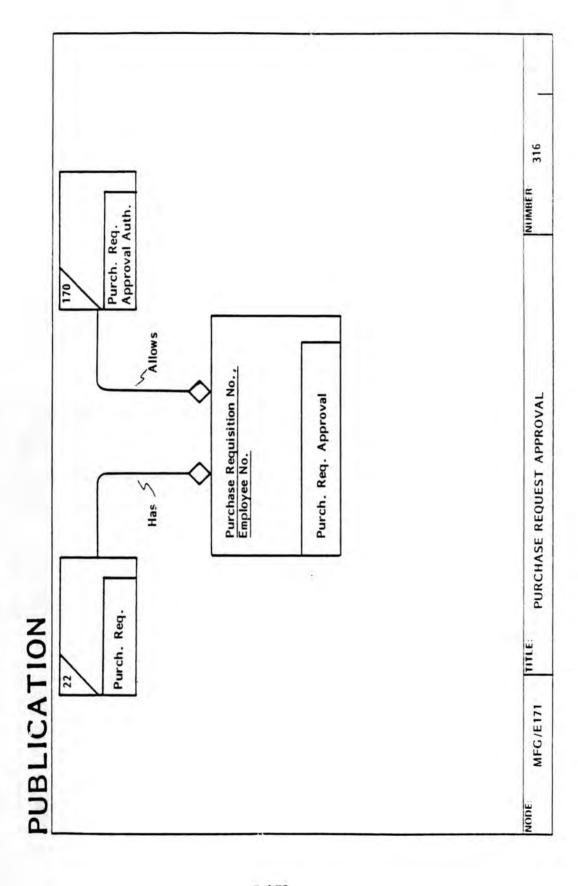




| Key Classes: Emplo Owned Attribute Cla Name: Definition: | | | | | |
|--|--|----------|--|-------------------------|--|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number- | Attril Inherited From: Entity Class Name | bute Migratio Number | n Path Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | has |
| ODE: MFG/E170 (G1) | TITLE: GLOSSARY: PUR AUT | CHASE RE | QUEST APPROVAL | NUMB | BÉR: 315 |

Entity Class Definition: Reflects the authorization limits of individual employees for purchase requests.

FTR110410000U September 1983



3-173

Entity Class Definition: Reflects approval(s) of a purchase request which have been effected.

Key Classes: Purchase Requisition No., Employee No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Owner Attribute Class(es) Entity Class Name | Attribute Class Owned By: | | Attribute Migration Path | | |
|---|---------------------------|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Purch. Req. No. | Purch. Request | 22 | Purch. Request | 22 | ha s |
| Employee No. | Employee | 116 | Purch. Req. Approval Auth. | 170 | shows |
| IODE: MFG/E171 (G1) | TITLE: GLOSSARY: PUR | CHASE RE | QUEST APPROVAL | NUMB | DER: 317 |

FTR110410000U September 1983 ST 252

FTR110410000U September 1983

Entity Class Definition: Reflects the occurrence of purchase requests which exist to satisfy requirements for procurement of facilities, equipment, materials and/or services which are specific to a

contract.

Entity Class Synonyms: Process Standard

Key Classes: Purchase Requestion No.

Owned Attribute Classes:

Name:

Definition:

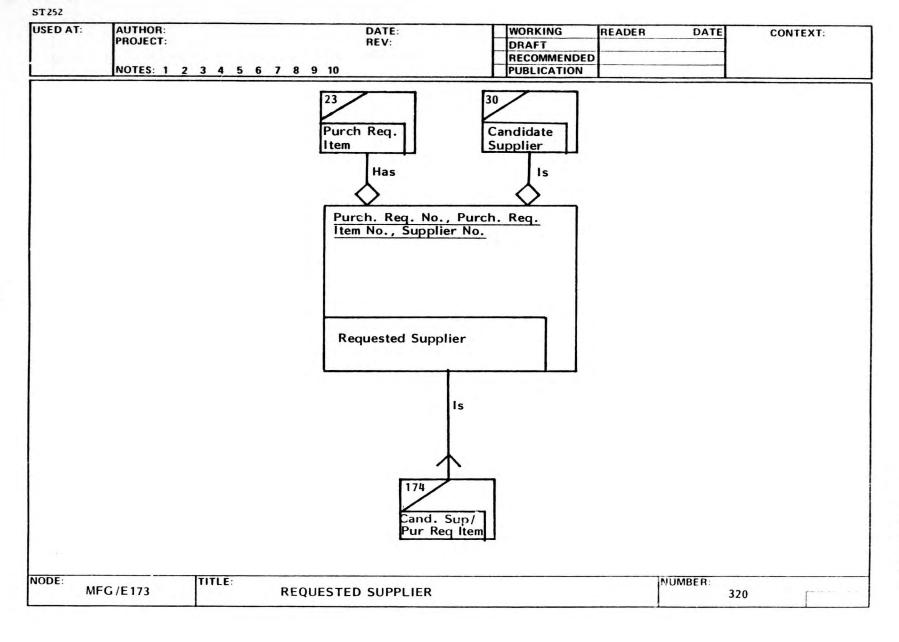
| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|----------------------|---------------------------|--------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purch. Req. No. | Purch. Request | 22 | Purch. Request | 22 | is |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | results in |
| | | | | | |
| | | 1 | | | |
| | | | | | |
| IODE: MEC /E172 (C1) | TITLE: | | | INUME | ļ icp. |

NODE: MFG/E172 (G1)

GLOSSARY: CONTRACT PURCHASE REQUEST

NUMBÉR:

319



 ∞

3-177

Entity Class Definition: A requested or suggested supplier specified by the originator of a purchase request item.

Key Classes: Purchase Requisition No., Purchase Requisition Item No., Requested Supplier Name

Owned Attribute Classes:

Name: Requested Supplier Name

Definition: Name of the requested supplier.

| Inherited | Attribute Class Owned By: | | Attrib | ute Migratio | n Path |
|---|--|----------------|--|----------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Req. No. Purch. Req. Item No. Supplier No. | Purchase Request Purch. Req. Item Candidate Supplier | 22 23 30 | Purchase Req. Item Purchase Req. Item Candidate Supplier | 23 23 30 | has has is |
| ODE: MFG/E173 (G1) | TITLE: GLOSSARY: REC | QUESTED S | SUPPLIER | NUMB | ER: 321 |

FTR110410000U September 1983 .178

FTR110410000U September 1983

Entity Class Definition: Reflects the use of a candidate supplier as a requested supplier of a specific purchase

request item.

Key Classes: (Purchase Requisition No., Purchase Requisition Item No., Requested Supplier Name)
(Purchase Requisition No., Purchase Requisition Item No., Supplier No.)

Owned Attribute Classes:

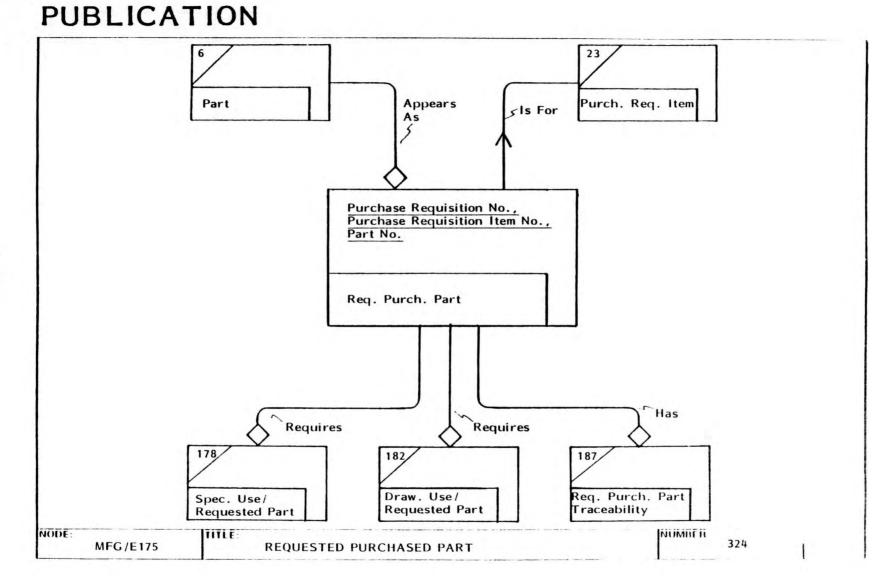
Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attrib | ute Migratio | n Path |
|----------------------------|---------------------------|-----------|--------------------------------------|--------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Supplier No. | Candidate Supplier | 30 | Candidate Supplier | 30 | is used as |
| Purch. Req. No. | Purch. Request | 22 | Requested Supplier | 173 | is |
| Purch. Req. Item No. | Purch. Req. Item | 23 | Requested Supplier | 173 | is |
| Requested Supplier Name | Requested Supplier | 173 | Requested Supplier | 173 | is |
| NODE: MFG/E174 (G1) | TITLE: GLOSSARY: CANE | DIDATE SU | JPPLIER USE FOR QUEST ITEM | NUME | 323 T |

FTR110410000U September 1983

8 September 198



3-181

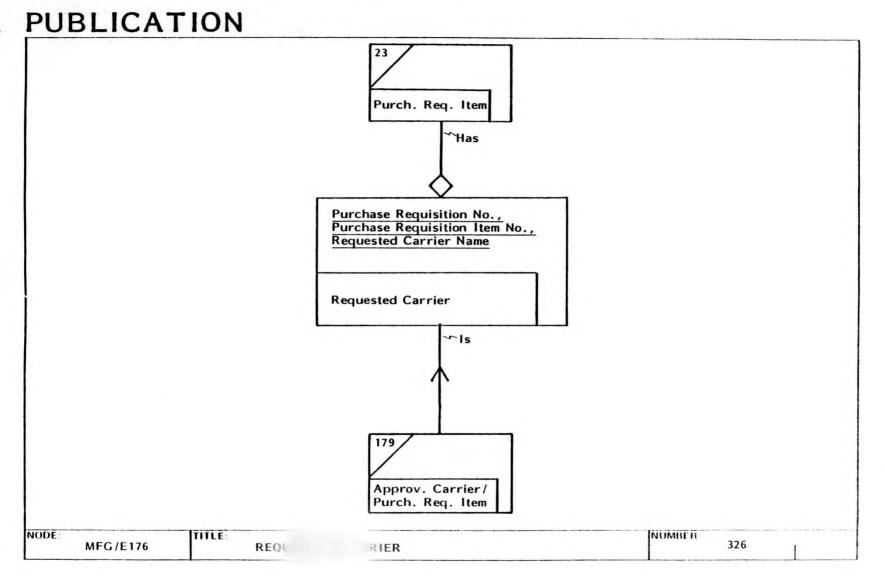
Key Classes: Purchase Requisition No., Purchase Requisition Item No., Part No. **Owned Attribute Classes:**

Entity Class Definition: Reflects the requirement for a specific part by a purchase request item.

Name:

Definition:

| Inherited | Attribute Class Owned By | | Attribute Class Owned By: Attribute | te Migratio | n Path |
|---------------------------|--------------------------|----------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | appears as |
| Purchase Req. No. | Purchase Request | 22 | Purchase Request Item | 23 | is for |
| Purchase Req. Item No. | Purchase Request Item | 23 | Purchase Request Item | 23 | is for |
| DDE: | ITITLE: | | | INUMA S | 60. |
| MFG/E175 (G1) | GLOSSARY: REC | UESTED F | PURCHASED PART | NUMB | 325 |



FTR110410000U September 1983

 ∞

Entity Class Definition: A requested or suggested carrier specified by the originator of a purchase request item.

Key Classes: Purchase Requisition No., Purchase Requistion Item No., Requested Carrier Name

Owned Attribute Classes:

MFG/E176 (G1)

Name: Requested Carrier Name

Definition: Name of the carrier requested

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|-------------------------|---------------------------|-----------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purch. Req. No. | Purchase Request | 22 | Purch. Req. Item | 23 | has |
| Purch. Req. Item No. | Purch. Req. Item | 23 | Purch. Req. Item | 23 | has |
| | | | | 1/2 | |
| | | | | | |
| ODE: MEG /E176 (C1) | TITLE: GLOSSARY: DEO | LIESTED C | | NUMB | ER: |

GLOSSARY: REQUESTED CARRIER

FTR110410000U September 1983

327

ST 252

FTR110410000U 3 September 1983

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 6 | DATE: REV: 5 7 8 9 10 | WORKING READER DRAFT RECOMMENDED PUBLICATION | R DATE | CONTEXT: |
|----------|--------------------------------------|--|--|---------|----------|
| | | Part Is Supplied By Part No., Supplier | Candidate Supplier Is Used As | | |
| | | Approved Part Sou | rce | | |
| | | | | | |
| NODE: MF | G/E177 | APPROVED PART SOURCE | | NUMBER: | 28 [|

Entity Class Definition: Reflects suppliers that are approved as sources of specific parts.

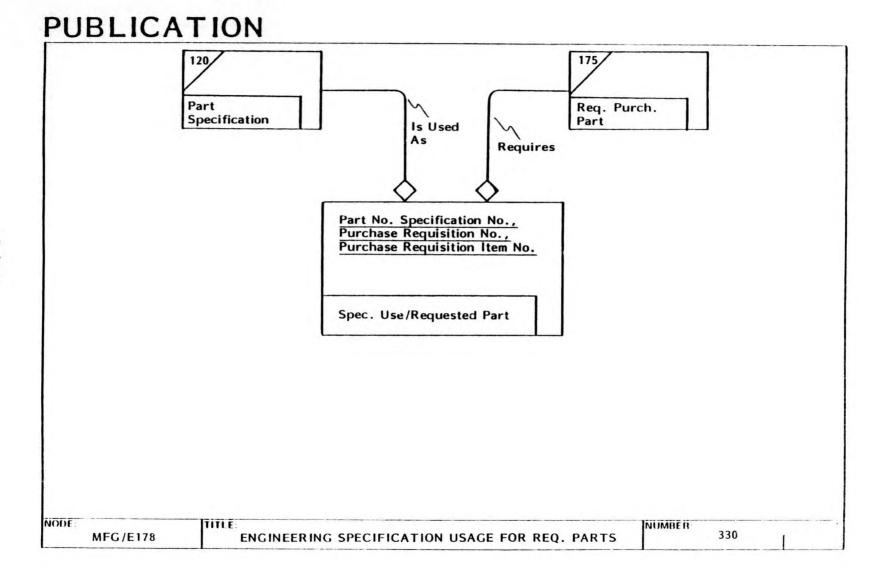
Owned Attribute Classes:

Key Classes: Part No., Supplier No.

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attrib | ute Migratio | n Path |
|-----------------------|---------------------------|----------|--------------------------------------|--------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | is supplied by |
| Supplier No. | Candidate Supplier | 30 | Candidate Supplier | 30 | is used as |
| | | | | | |
| ODE: MFG/E177 (G1) | TITLE: GLOSSARY: API | PROVED P | ART SOURCE | NUME | 329 |



Entity Class Definition: The use of an engineering specification to define the technical characteristics of a requested part.

Key Classes: Part No., Specification No., Purchase Requestion No., Purchase Requisition Item No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part No. | Part | 6 | Part Specification | 120 | is used as |
| Specification No. | Eng. Specification | 13 | Part Specification | 120 | is used as |
| Purch. Req. No. | Purch. Request | 22 | Req. Purch. Part | 175 | requires |
| Purch. Req. Item No. | Purch. Req. Item | 23 | Req. Purch. Part | 175 | requires |
| Part No. | Part | 6 | Req. Purch. Part | 175 | requires |
| | | | | | |
| NODE: MFG/E178 (G1) | GLOSSANT. | | SPECIFICATION USE | D NUME | 331 |

FOR REQUESTED PART

Entity Class Definition: Reflects the use of an approved carrier as a requested carrier of a purchase request item.

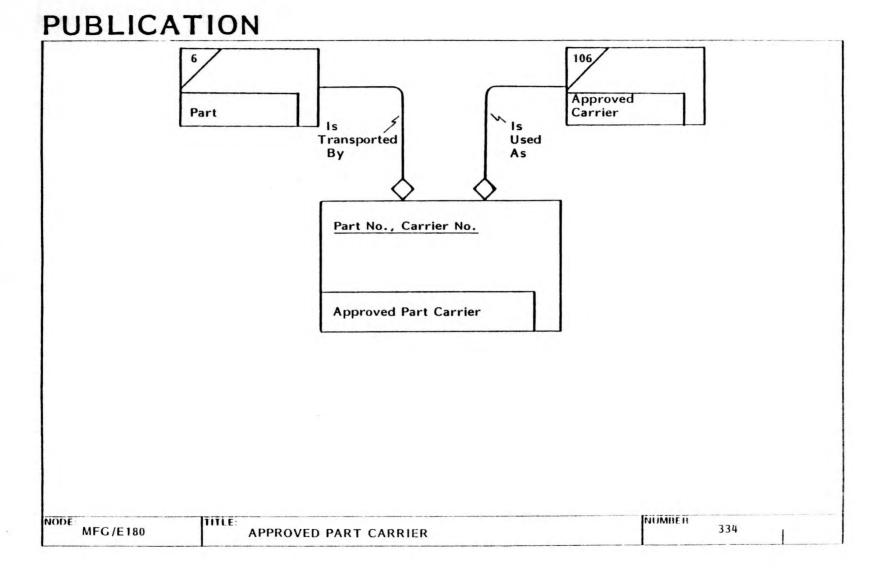
Key Classes: (Purchase Requisition No., Purchase Requisition Item No., Requested Carrier Name)
(Purchase Requisition No., Purchase Requisition Item No., Carrier No.)

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attrib | oute Migratio | n Path |
|-------------------------|---------------------------|----------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Carrier No. | Approved Carrier | 106 | Approved Carrier | 106 | is used as |
| Purch. Req. No. | Purchase Request | 22 | Requested Carrier | 176 | is |
| Purch. Req. Item No. | Purch. Req. Item | 23 | Requested Carrier | 176 | is |
| Req. Carrier Name | Requested Carrier | 176 | Requested Carrier | 176 | is |
| | | | | | |
| ODE: MFG/E179 (G1) | | ROVED CA | RRIER USE FOR PURCI | HASE NUMB | ER: 333 |



MFG/E180 (G1)

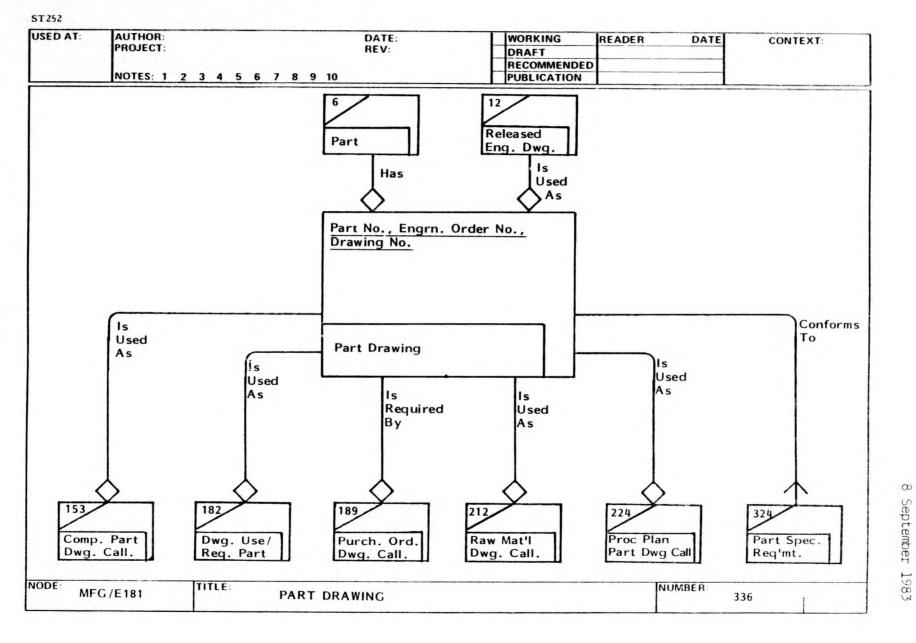
FTR110410000U September 1983

NUMBER:

335

Entity Class Definition: Reflects carriers which have been approved for transporting specific parts. Key Classes: Part No., Carrier No. Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number Part No. Part 6 Part is transported by 6 Carrier No. **Approved Carrier Approved Carrier** 106 106 is used as NODE: TITLE:

GLOSSARY: APPROVED PART CARRIER



FTR110410000U September 1983

337

Entity Class Definition: Reflects the application of an engineering drawing to a specific part.

Key Classes: Part No., Drawing No., Engineering Order No.

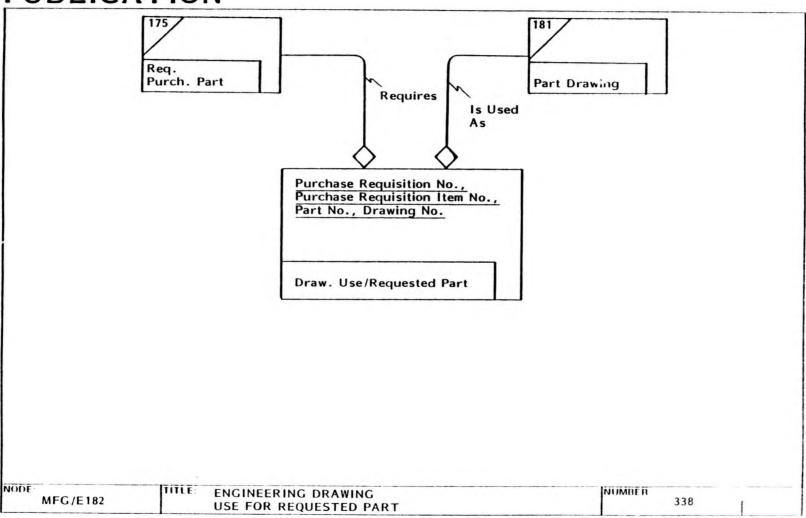
Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | At | Attribut | bute Migration Path | |
|--------------------------|--|--------|--------------------------------------|---------------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | has |
| Drawing No. | Drawing | 414 | Released Eng. Drawing | 12 | is used as |
| Engineering Order No. | Engineering Order | 333 | Released Eng. Drawing | 12 | is used as |
| ODE: MFG/E181 (G1) | TTITLE: 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | INUMB | |

PUBLICATION



Entity Class Definition: Reflects the use of an engineering drawing to graphically represent a requested purchase part.

Key Classes: Purchase Requisition No., Purchase Request Item No., Part No., Drawing No.

Owned Attribute Classes:

Name:

Definition:

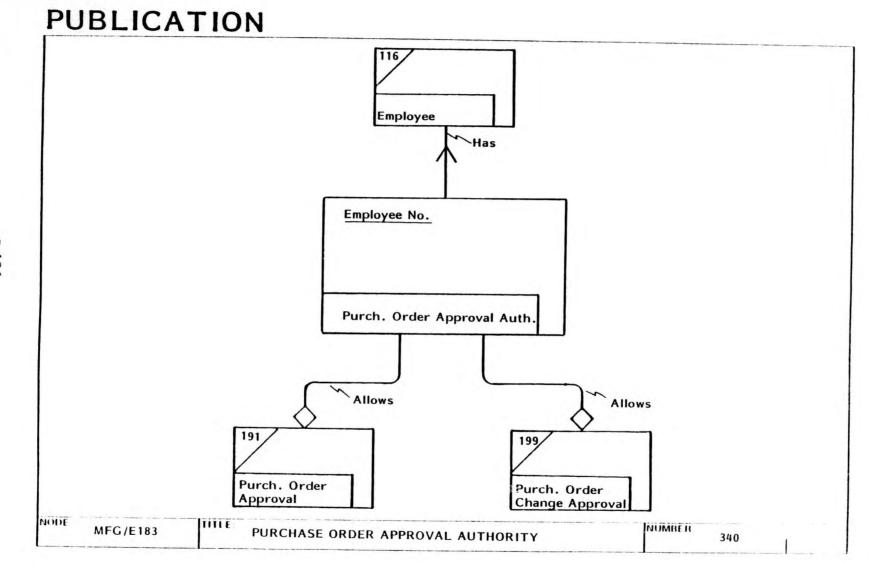
| Class Owned By: ss Name quest | Number 22 | Inherited From: Entity Class Name Req. Purch. Part | Number 175 | Inherited Through: Relation Class Name requires |
|-------------------------------|--------------|--|----------------|---|
| | 22 | Req. Purch. Part | 175 | requires |
| | | | | |
| q. Item | 23 | Req. Purch. Part | 175 | requires |
| | 6 | Req. Purch. Part | 175 | requires |
| | 6 | Part Drawing | 181 | is used as |
| ng. Drawing | 12 | Part Drawing | 181 | is used as |
| | ing. Drawing | 6 | 6 Part Drawing | 6 Part Drawing 181 |

NODE: MFG/E182 (G1)

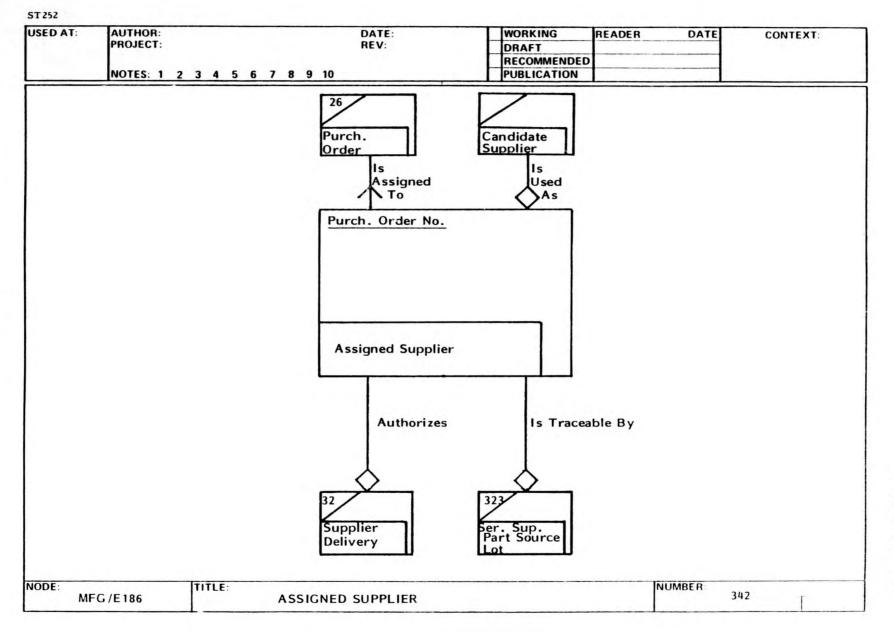
GLOSSARY: ENGINEERING DRAWING USE FOR REQUESTED PART

NUMBER:

339



| Owned Attribute Cla Name: Definition: | sses: | | | | |
|---|--|--------|--|---------------|--|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | bute Migratio | n Path Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | has |
| | | | | | |



FTR110410000U 8 September 1983

3-199

FTR110410000U 3 September 1983

NUMBER:

343

Entity Class Definition: The supplier assigned to (selected for) a purchase order. Key Classes: Purchase Order No. **Owned Attribute Classes:** Name: **Definition: Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name; Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Purch. Order No. Purch. Order 26 Purch. Order 26 is assigned to Supplier No. Candidate Supplier 30 Candidate Supplier 30 is used as

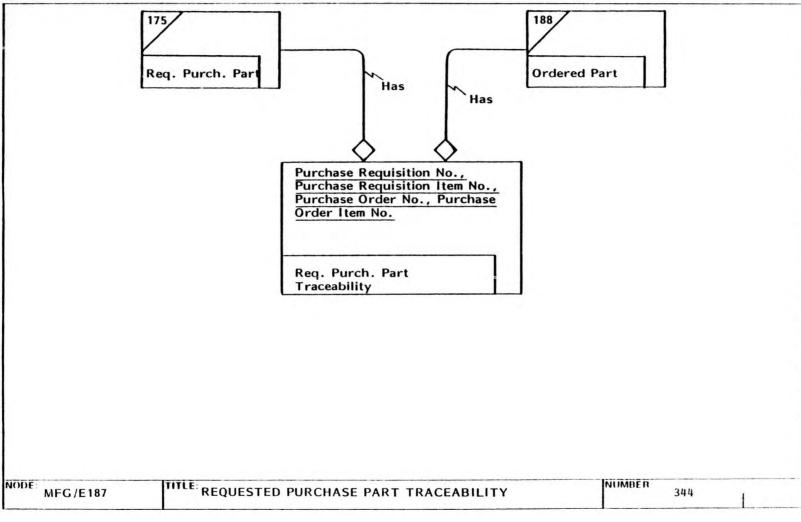
GLOSSARY: ASSIGNED SUPPLIER

TITLE:

MFG/E186 (G1)

 ∞

PUBLICATION



Entity Class Definition: Reflects the traceability of each requested purchased part to its use in a specific purchase order; this accommodates both the practice of 'splitting' requisition items and 'combining'

requisition items.

Key Classes: Purchase Requisition No., Purchase Requisition Item No., Purchase Order No., Purchase Order Item No.

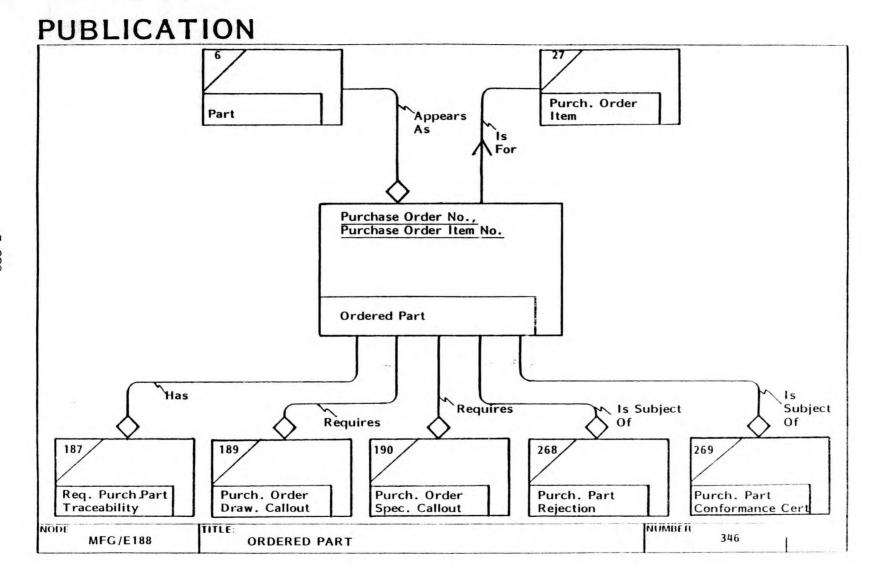
Owned Attribute Classes:

Name:

Definition:

| nherited Attribute Class Owned By: | | Attribute Migration Path | | | |
|------------------------------------|---|---|---|--|--|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Purchase Request | 22 | Req. Purch. Part | 175 | has | |
| Purch. Req. Item | 23 | Req. Purch. Part | 175 | has | |
| Part | 6 | Req. Purch. Part | 175 | has | |
| Purchase Order | 26 | Ordered Part | 188 | is made up of | |
| Purchase Order Item | 27 | Ordered Part | 188 | is made up of | |
| Part | 6 | Ordered Part | 188 | is made up of | |
| | | | 7/7 - 71 | | |
| | Purchase Request Purch. Req. Item Part Purchase Order Purchase Order Item | Purchase Request 22 Purch. Req. Item 23 Part 6 Purchase Order 26 Purchase Order Item 27 | Attribute Class Owned By: Entity Class Name Purchase Request Purch. Req. Item Part Purchase Order Purchase Order Item Number Inherited From: Entity Class Name Req. Purch. Part Req. Purch. Part Ordered Part Ordered Part | Attribute Class Owned By: Entity Class Name Number Inherited From: Entity Class Name Number Purchase Request 22 Req. Purch. Part 175 Purch. Req. Item 23 Req. Purch. Part 175 Part 6 Req. Purch. Part 175 Purchase Order 26 Ordered Part 188 Purchase Order Item 27 Ordered Part 188 | |

 ∞



Entity Class Definitions: The occurrence of a part being ordered by a purchase order item.

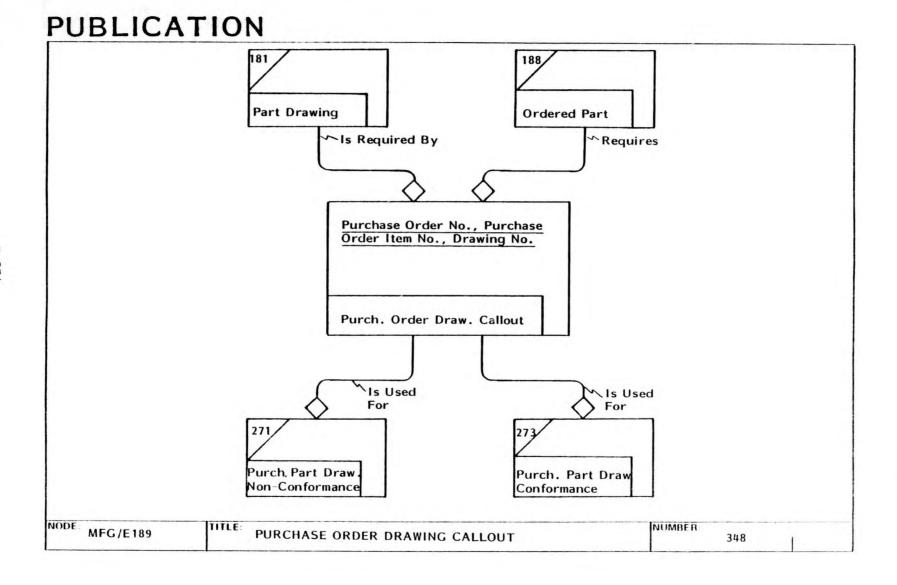
Key Classes: Purchase Order No., Purchase Order Item No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Part | 6 | appears as | |
| Purchase Order No. | Purchase Order | 26 | Purch. Order Item | 27 | is for | |
| Purch. Order Item No. | Purch. Order Item | 27 | Purch. Order Item | 27 | is for | |
| ODE: MFG/E188 (G1) | TITLE: GLOSSARY: OR | DERED PA | RT | NUMB | SÉR: 347 | |



3-205

FTR110410000U September 1983

349

Entity Class Definition: A drawing which is specified by a purchase order item.

Key Classes: Purchase Order No., Purchase Order Item No., Drawing No.

Owned Attribute Classes:

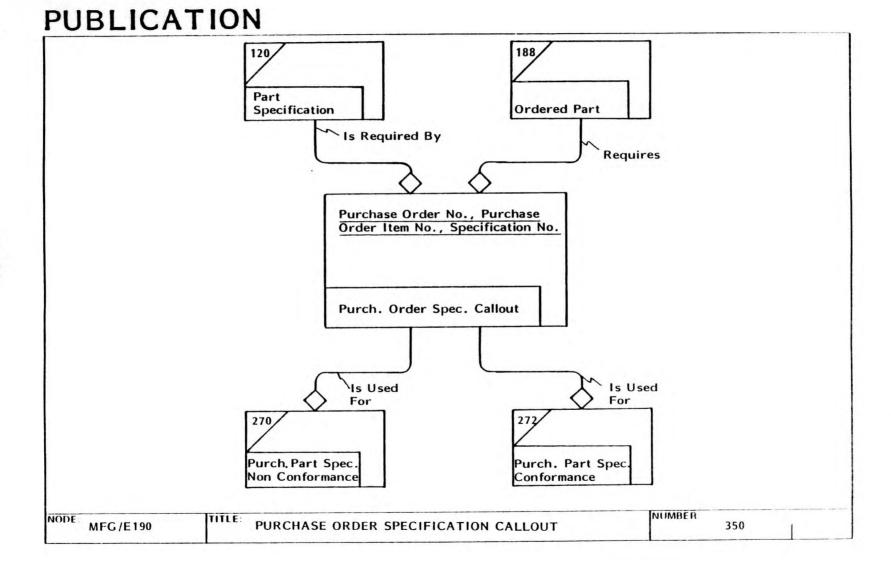
Name:

Definition:

MFG/E189 (G1)

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--|---------------------------|--------|--------------------------------------|--------|---|
| 그래 뭐 하게 하다 하는 바다는 것 같아. 그는 그를 내려가 하는 것이 하는 것이 하는 것이 하다 없다. | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part Drawing | 181 | is required by |
| Drawing No. | Released Eng. Drawing | 12 | Part Drawing | 181 | is required by |
| Purch. Order No. | Purch. Order | 26 | Ordered Part | 188 | requires |
| Purch. Order Item No. | Purch. Order Item | 27 | Ordered Part | 188 | requires |
| ODE: MFG/E189 (G1) | TITLE: GLOSSARY PUR | | DER DRAWING CALLO | INUMB | ÉR: |

GLOSSARY: PURCHASE ORDER DRAWING CALLOUT



Entity Class Definition: A specification which is required by a purchase order item.

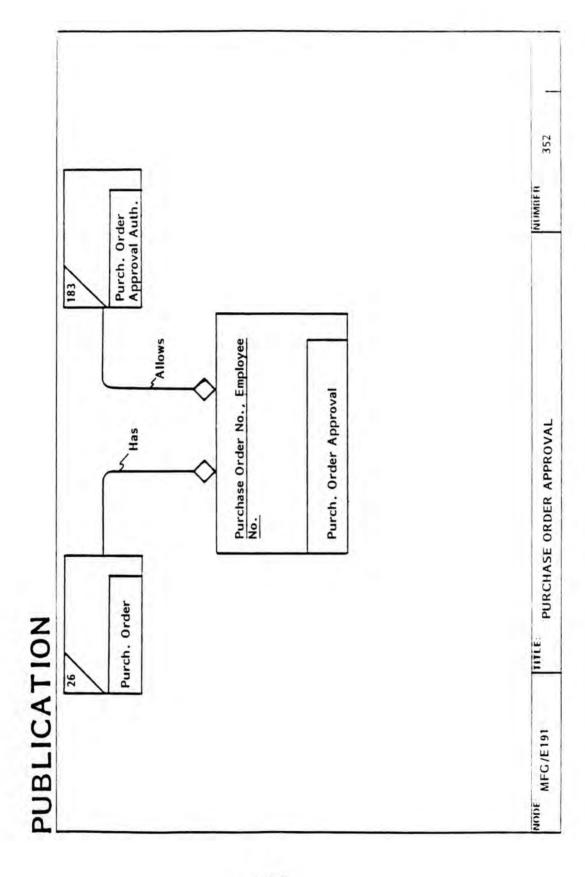
Key Classes: Purchase Order No., Purchase Order Item No., Specification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attrib | bute Migratio | n Path |
|--------------------------|---------------------------|----------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part No. | Part | 6 | Part Specification | 120 | is required by |
| Specification No. | Eng. Specification | 13 | Part Specification | 120 | is required by |
| Purch. Order No. | Purch. Order | 26 | Ordered Part | 188 | requires |
| Purch. Order Item No. | Purch. Order Item | 27 | Ordered Part | 188 | requires |
| NODE: MFG/E190 (G1) | | RCHASE O | RDER SPECIFICATION | NUMB | 351 351 |



3-209

FTR110410000U 3 September 1983

| Owned Attribute Cla | sses: | | | | |
|---|--|--------------|--|--------------|---|
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| nherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
| Attribute Class(es) | | | Inherited From: | | Inherited Through: Relation Class Name |
| ttribute Class(es) | Entity Class Name | Number | Entity Class Name | Number | Relation Class Name |
| | Entity Class Name Purch. Order | Number 26 | | Number 26 | has Relation Class Name |
| urch. Order No. | | | Entity Class Name | | |
| urch. Order No. | Purch. Order | 26 | Entity Class Name Purch. Order Purch. Order Approval | 26 | has |
| urch. Order No. | Purch. Order | 26 | Entity Class Name Purch. Order Purch. Order Approval | 26 | has |
| urch. Order No. | Purch. Order | 26 | Entity Class Name Purch. Order Purch. Order Approval | 26 | has |
| Attribute Class(es) Purch. Order No. Imployee No. | Purch. Order | 26 | Entity Class Name Purch. Order Purch. Order Approval | 26 | has |

ST 252

USED AT: AUTHOR: PROJECT: DATE: REV: WORKING READER DATE CONTEXT: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 81 Purchase Sales Contract Order Results Is In Purch. Order No. Contract Purch. Order NODE: TITLE: MFG/E192 NUMBER: CONTRACT PURCHASE ORDER 354

FTR110410000U 8 September 1983

Key Classes: Purchase Order No.

Owned Attribute Classes:

Definition:

Name:

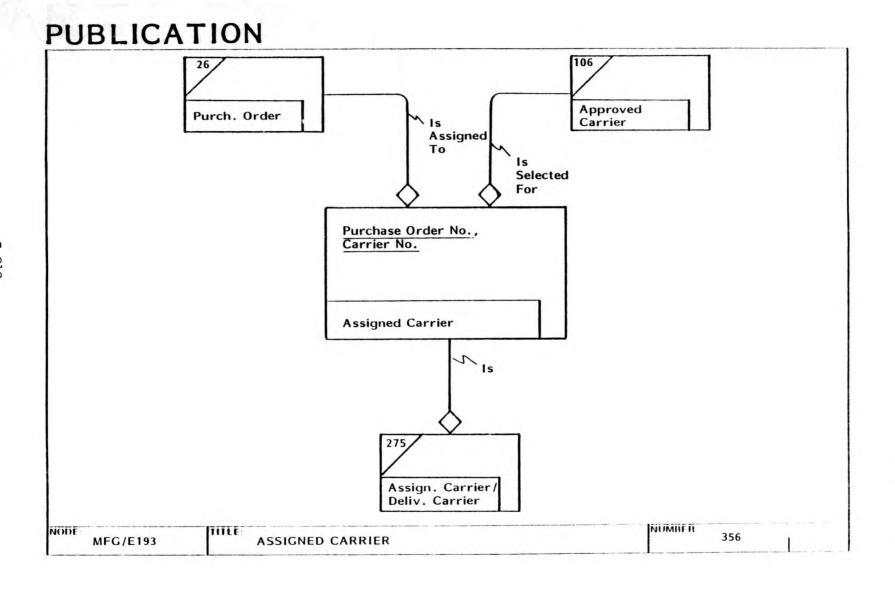
Attribute Migration Path Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name; Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Purch. Order No. Purch. Order Purch. Order 26 26 is Contract No. Sales Contract 81 Sales Contract 81 results in NODE: MFG/E192 (G1) TITLE: CONTRACT PURCHASE ORDER NUMBER: GLOSSARY: 355

Entity Class Definition: Reflects purchase orders which have been issued to satisfy contract requirements.

FTR110410000U September 1983

 ∞





Entity Class Definition: Reflects carrier(s) assigned by the factory to transport purchase order items.

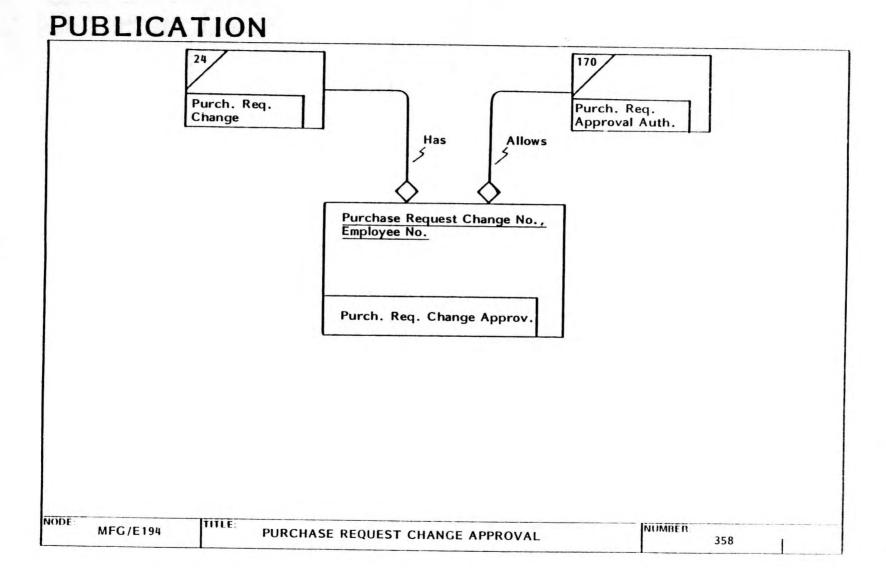
Key Classes: Purchase Order No., Carrier No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|-------------------------------|-----------|--------------------------------------|-----------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Purch. Order No. Carrier No. | Purch. Order Approved Carrier | 26 106 | Purch. Order Approved Carrier | 26 106 | is assigned to |
| | | | | | |
| NODE: MFG/E193 (G1) | TITLE: GLOSSARY: ASS | IGNED CA | RRIER | NUME | BÉR: 357 |



Attribute Migration Path Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Purchase Request Change No. Purchase Req. Change Purch. Req. Change 24 24 has **Employee** Purchase Request Employee No. allows 116 170 Approval Auth. NODE: MFG/E194 (G1) TITLE: NUMBER:

PURCHASE REQUEST CHANGE APPROVAL

Entity Class Definition: Reflects the approvals of purchase request changes which have been effected.

Key Classes: Purchase Request Change No., Employee No.

GLOSSARY:

Owned Attribute Classes:

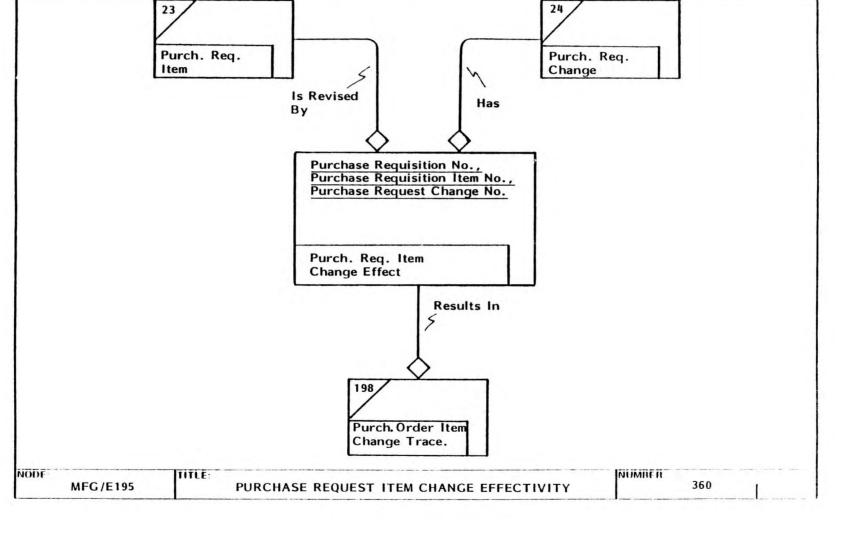
Definition:

Name:

FTR110410000U September 1983

359

PUBLICATION



 ∞

Entity Class Definition: Reflects revisions to purchase request items.

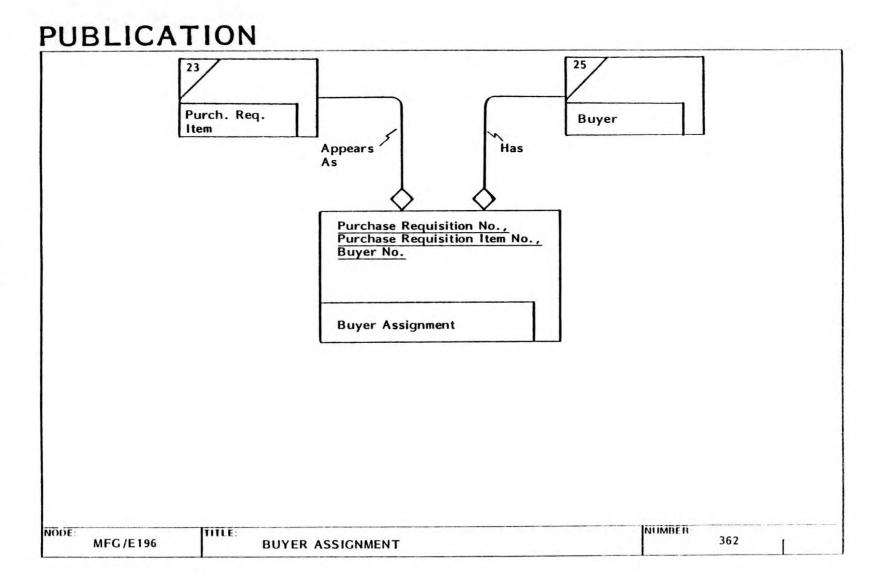
Key Classes: Purchase Requisition No., Purchase Requisition Item No., Purchase Request Change No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purch. Req. No. | Purch. Request | 22 | Purch. Req. Item | 23 | is revised by |
| Purch. Req. Item No. | Purch. Req. Item | 23 | Purch. Req. Item | 23 | is revised by |
| Purch. Req. Change No. | Purch. Req. Change | 24 | Purch. Req. Change | 24 | has |
| NODE: MFG/E195 (G1) | LI USSARY: | RCHASE R | EQUEST ITEM CHANGE | NUME | BÉR: 361 |



FTR110410000U September 1983

Entity Class Definition: Reflects the assignment of a specific purchase request item to an individual buyer.

Key Classes: Purchase Requisition No., Purchase Requisition Item No., Buyer No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Purch. Req. No. | Purchase Request | 22 | Purch. Req. Item | 23 | appears as |
| Purch. Req. Item | Purchase Request Item | 23 | Purch. Req. Item | 23 | appears as |
| Buyer No. | Buyer | 25 | Buyer | 25 | has |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE. | | | | | |

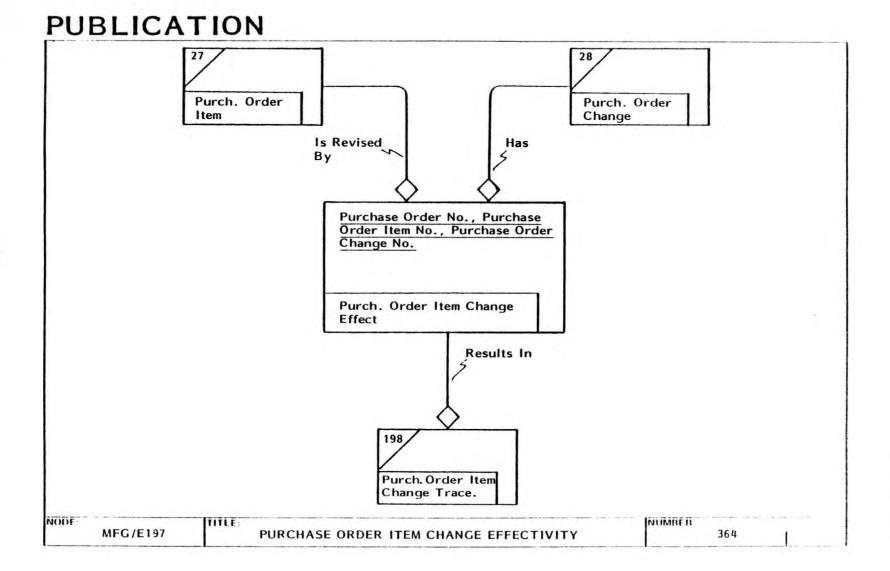
MFG/E196 (G1) TITLE: GLOSS

GLOSSARY: BUYER ASSIGNMENT

NUMBER:

363





FTR110410000U September 1983

Entity Class Definition: Reflects revisions to purchase order items.

Key Classes: Purchase Order No., Purchase Order Item No., Purchase Order Change No.

Owned Attribute Classes:

Name:

Definition:

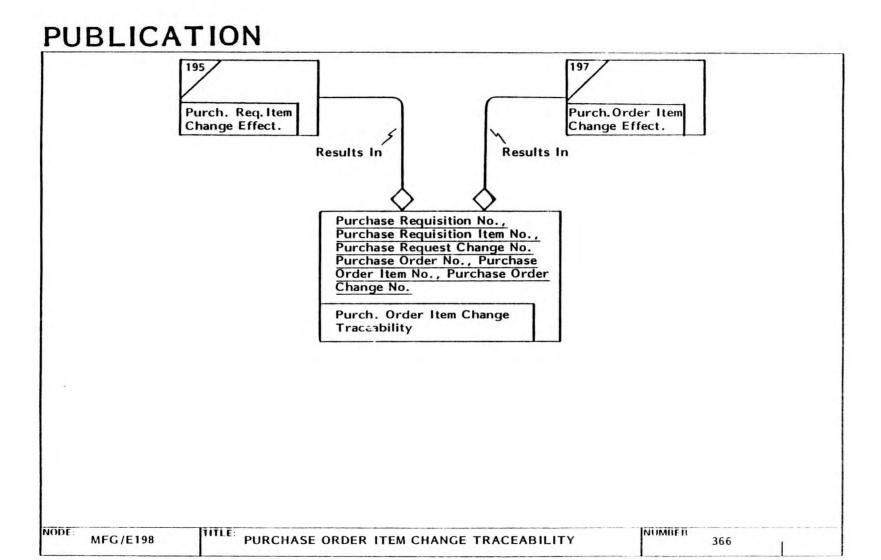
| Inherited | Attailante Class Owned Box | | Attribute Migration Path | | |
|----------------------------|--|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purch. Order No. | Purchase Order | 26 | Purch. Order Item | 27 | is revised by |
| Purch. Order Item | Purchase Order Item | 27 | Purch. Order Item | 27 | is revised by |
| Purch. Order Change No. | Purchase Order Change | 28 | Purch. Order Change | 28 | has |
| IODE: MEC/E197 (C1) | TITLE: CLOSSARY PIL | | | INUME | (|

NODE: MFG/E197 (G1)

GLOSSARY:

PURCHASE ORDER ITEM CHANGE EFFECTIVITY

365



Entity Class Definition: Reflects the traceability of purchase requisition item changes to the corresponding

purchase order item changes.

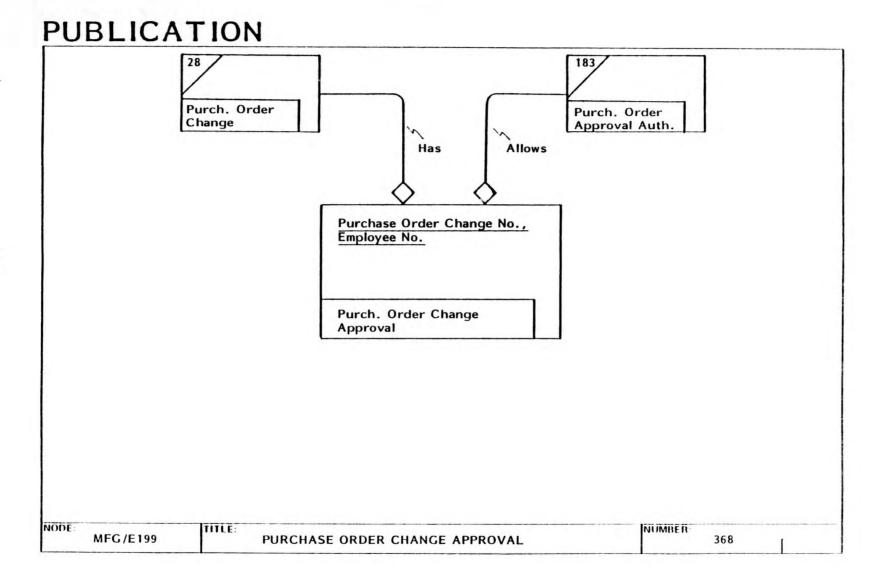
Key Classes: Purchase Requisition No., Purchase Requisition Item No., Purchase Request Change No., Purchase Order No., Purchase Order Item No., Purchase Order Change No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Purch. Reg. No. | Purch. Request | 22 | Purch. Req. Item Change Effect. | 195 | results in |
| Pur. Req. Item No. | Purch. Req. Item | 23 | Pur. Req. Item Change Effect. | 195 | results in |
| Purch. Req. Change No. | Purch. Req. Change | 24 | Purch. Req. Item Change Effect. | 195 | results in |
| Purch. Order No. | Purch. Order | 26 | P.O. Item Change Effect. | 197 | results in |
| P.O. Item No. | Purchase Order Item | 27 | P.O. Item Change Effect. | 197 | results in |
| P.O. Change No. | Purchase Order Change | 28 | P.O. Item Change Effect. | 197 | results in |
| ODE: MFG/E198 (G1) | GLUSSARY: | RCHASE O | RDER ITEM CHANGE | NUMB | BER: 367 |



Attribute Migration Path Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Purchase Order Change No. Purchase Order Change Purch. Order Change 28 has 28 Employee No. **Employee** Purch, Order Approval 116 183 allows Auth. NODE: MFG/E199 (G1) TITLE: NUMBER: PURCHASE ORDER CHANGE APPROVAL GLOSSARY: 369

Entity Class Definition: Reflects the approvals of purchase order changes which have been effected.

Key Classes: Purchase Order Change No., Employee No.

Owned Attribute Classes:

Definition:

Name:

| ISED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|----------|------------------|-----------------------------------|---------------|--------|--------|--|
| | PROJECT: | REV: | DRAFT | | | |
| | NOTES: 1 2 3 4 5 | 6 7 9 0 10 | RECOMMENDE | D | | |
| | NOTES: 1 2 3 4 5 | 0 7 8 9 10 | PUBLICATION | | | The state of the s |
| | | 74 | 147 | | | |
| | | | | | | |
| | | Process Plan | Ser. Part | | | |
| | | Mat'l Reqmt | Instance | | | |
| | | Is | Satisfies | | | |
| | | Τ . | Journalies | | | |
| | | | | | | |
| | | Process Plan No. 1 | Part No | | | |
| | | Process Plan No., I Serial No. | art 140., | | | |
| | | | 1 1 1 1 | | | |
| | | 1 | | | | |
| | | 1 | 1 1 | | | |
| | | 1 | 1.0 | | | |
| | | | | | | |
| | | Serialized Raw Mat'l | Danilos I | | | |
| | | Serialized Raw Ma(1) | Red.mt. | | | |
| | | L | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | - | | | | | |
| DE: M | FG/E209 TITLE: | SERIALIZED RAW MATERIA | I REQUIREMENT | N | UMBER: | 70 |

September 198

Entity Class Definition: A raw material callout which is for serialized instance of raw material.

Key Classes: Process Plan No., Part No., Serial No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|-----------|--------------------------------------|----------|---|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Serialized Part Instance | 147 | satisfies |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | satisfies |
| Process Plan No. | Process Plan | 415 | Process Plan Material Callout | 74 | is |
| ODE: MFG/E209 (G1) | TITLE: GLOSSARY: SER | IALIZED R | AW MATERIAL REQUIREM | ENT NUME | BÉR: 371 |

| T 252 | | | | |
|---------|-------------------------|---|---------------------------------------|---------|
| SED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING READER DATE DRAFT RECOMMENDED | CONTEXT |
| | NOTES: 1 2 3 | Process Plan Mat'l Callout Process Plan No., | Part Lot Satisfies Part Lot No. | 1 |
| DE: N | ΜFG/E211 ^[T] | TLE: RAW MATERIAL LOT REQU | UREMENT NUMBER: | 372 |

Entity Class Definition: A raw material callout which is for a specific part lot.

Key Classes: Process Plan No., Part Lot No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------------|--|---------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | satisfies |
| Process Plan No. | Process Plan | 415 | Process Plan Material Callout | 74 | is |
| | | | | | |
| NODE: MFG/E211 (G1) | TITLE: GLOSSARY: RAW | MATERIA | L LOT REQUIREMENT | NUME | 373 |

ST 252

AUTHOR: PROJECT:

DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 181 Process Plan Mat'l Reqmt Part Drawing Is Specifies Used As Process Plan No. Raw Mat'l Dwg. Callout NODE: TITLE: NUMBER: MFG/E212 RAW MATERIAL DRAWING CALLOUT 374

WORKING

READER

DATE

DATE: REV:

> FTR110410000U September 1983

 ∞

CONTEXT:

Entity Class Definition: A drawing which is specified for a raw material callout.

Key Classes: Process Plan No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Drawing No. | Drawing | 414 | Part Drawing | 181 | is used as |
| Part No. | Part | 6 | Part Drawing | 181 | is used as |
| Eng. Order No. | Engineering Order | 333 | Part Drawing | 181 | is used as |
| Process Plan No. | Process Plan | 415 | Process Plan Material Callout | 74 | specifies |
| ODE: MFG/E212 (G1) | TITLE: GLOSSARY: RAY | W MATERIA | AL DRAWING CALLOUT | NUME | BÉR: 375 |

September 198

SERIALIZED PART CONFORMANCE CERTIFICATION

NODE

MFG/E213

TITLE:

NUMBER

376

Entity Class Definition: A part conformance certification for a serialized part instance.

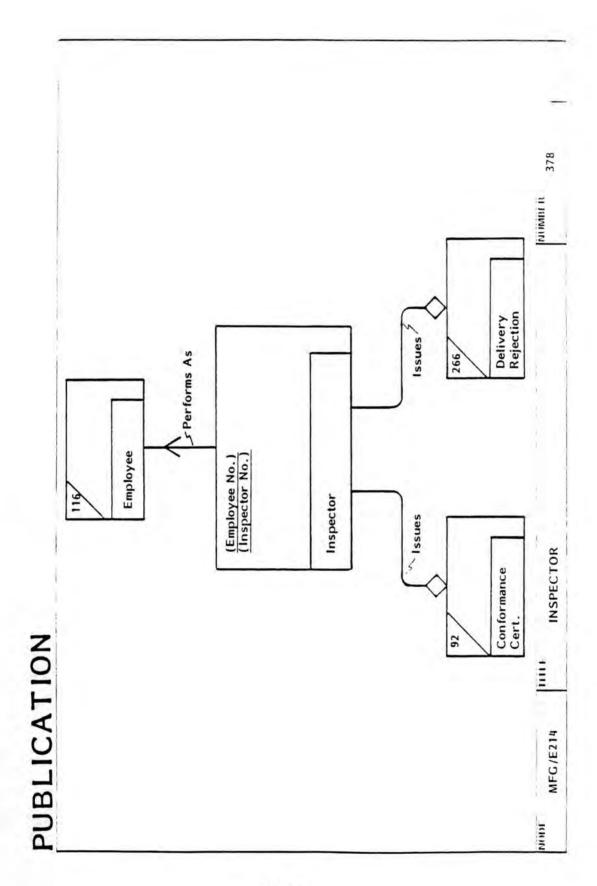
Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|-----------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Conformance Cert. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Part No. | Part | 6 | Part Specification | 120 | is used for |
| Specification No. | Eng. Specification | 13 | Part Specification | 120 | is used for |
| Part No. | Part | 6 | Serialized Part Instance | 147 | has |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | has |
| NODE: MFG/E213 (G1) | I GLUSSARI. | IALIZED F | PART SE CERTIFICATION | NUME | BER: 377 |



Entity Class Definition: An employee who inspects parts to determine the degree of conformity with applicable specifications.

Key Classes: (Employee No.) (Inspector No.)

Owned Attribute Classes:

Name: Inspector No.

Definition: A unique number assigned to each inspector

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Employee No. | Employee | 116 | Employee | 116 | performs as |
| NODE: MFG/E214 (G1) | TITLE: GLOSSARY: | INSPEC | TOR | NUMB | 379 |

Entity Class Definition: A conformance certification used for a specific part lot.

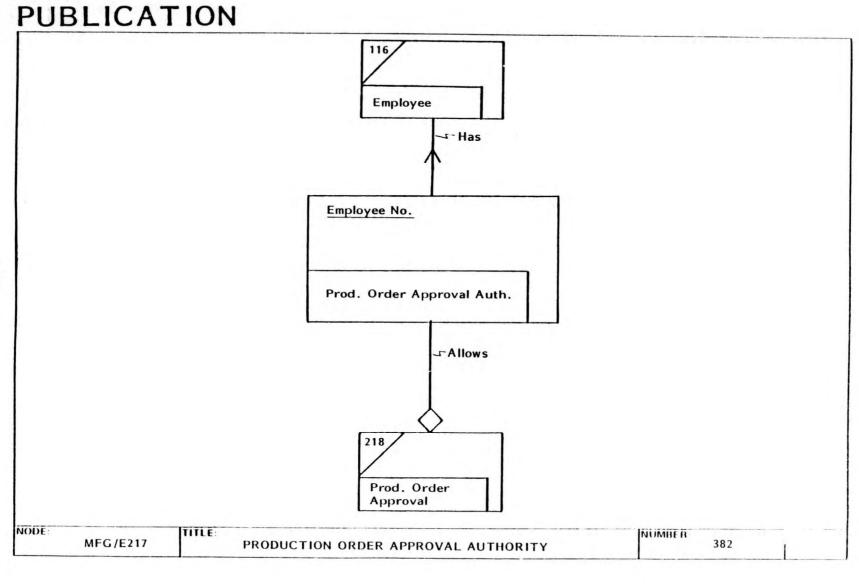
Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

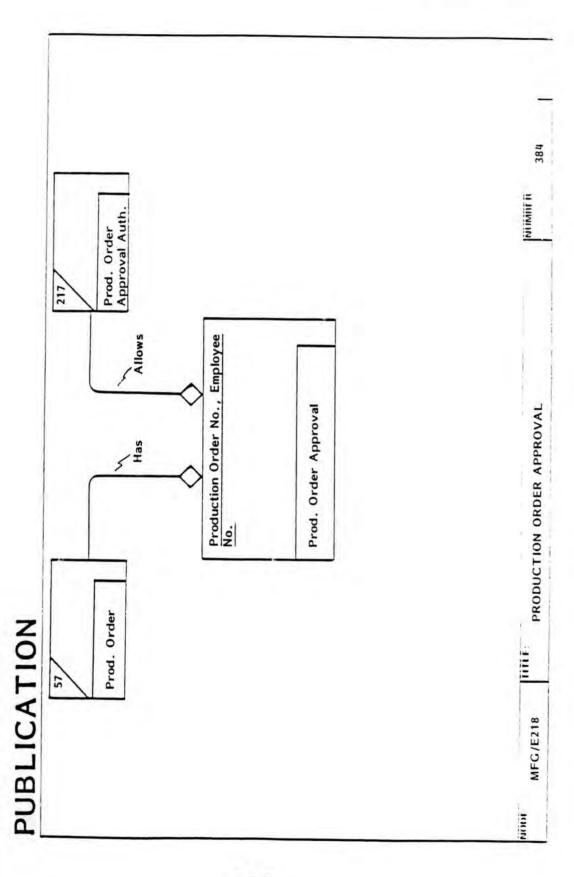
Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|-------------------------------|--|--------|--------------------------------------|--------|---|
| | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Conformance Cert. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | has |
| Part No. | Part | 6 | Part Specification | 120 | is used for |
| Specification No. | Eng. Specification | 13 | Part Specification | 120 | is used for |
| ODE: MFG/E215 (G1) | LI USSARY: | T LOT | E CERTIFICATION | NUME | BÉR: 381 |



Key Classes: Employee No. Owned Attribute Classes: Name: Definition: Inherited **Attribute Migration Path** Attribute Class Owned By: Attribute Class(es) Inherited From: **Entity Class Name** Inherited Through: Relation Class Name; Number Number **Entity Class Name** Employee No. **Employee** 116 Employee 116 has NODE: TITLE: MFG/E217 (G1) GLOSSARY: PRODUCTION ORDER APPROVAL AUTHORITY NUMBER: 383

Entity Class Definition: Reflects the approval limits of employees for production orders.



| S | |
|------------------|---|
| Œ | 7 |
| O | - |
| 1 | D |
| O | - |
| 3 | |
| 킁 | 0 |
| O | 4 |
| H | H |
| | 0 |
| - | 0 |
| 9 | O |
| $\tilde{\infty}$ | 8 |
| 1.1 | |

| Owned Attribute Clas Name: Definition: | sses : | | | | |
|--|---------------------------|---------|--------------------------------------|--------|---|
| | | | | | |
| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Production Order No. | Production Order | 57 | Production Order | 57 | has |
| Employee No. | Employee | 116 | Production Order Approval Auth. | 217 | allows |
| DDE: MFG/E218 (G1) | TITLE: GLOSSARY: PRO | DUCTION | ORDER APPROVAL | илмв | ÉR: 385 |

Entity Class Definition: Reflects the approvals which have been effected for production orders.

Key Classes: Production Order No., Employee No.

Entity Class Definition: An employee with responsibility for planning the release of production orders.

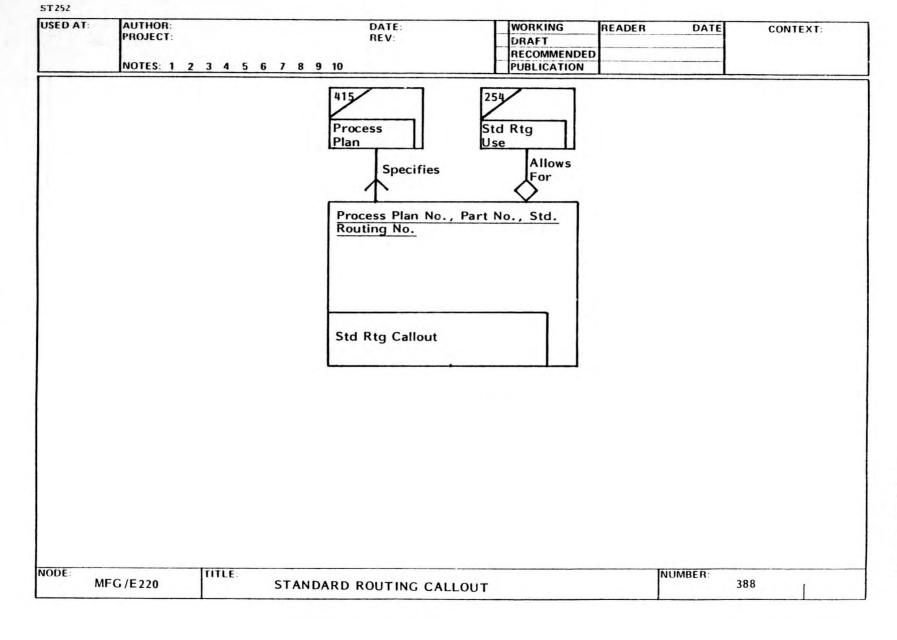
Key Classes: (Employee No.)
(Manufacturing Planner No.)

Owned Attribute Classes:

Name: (Manufacturing Planner No.)

Definition: A unique identification number assigned to each manufacturing planner.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Employee No. | Employee | 116 | Employee | 116 | performs as |
| | | | | | |
| ODE: MFG/E219 (G1) | TITLE: GLOSSARY: MA | ANUFACTI | JRING PLANNER | NUME | BER: 387 |



Entity Class Definition: The specifiction of a planned routing for use by a specific process plan.

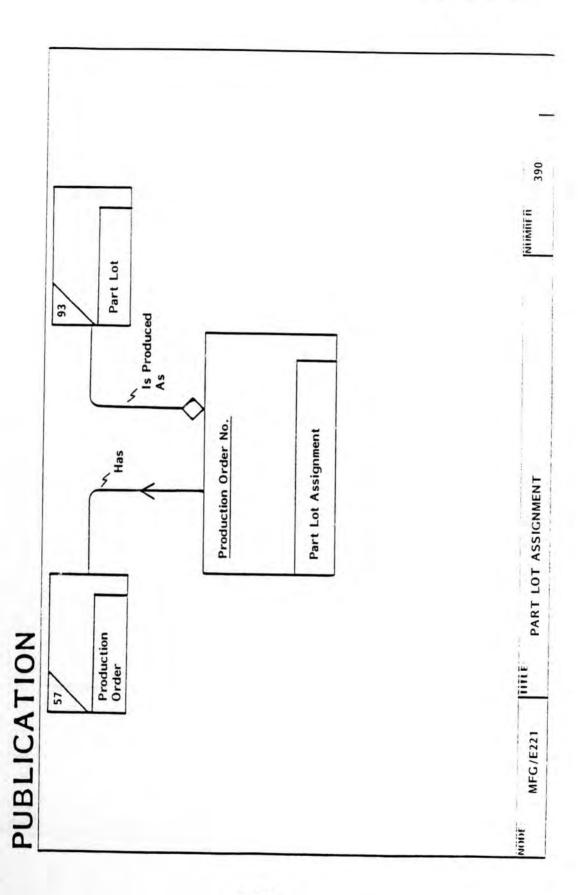
Key Classes: Process Plan No., Part No., Standard Routing No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|----------------------------------|--|---------|--------------------------------------|--------|--|
| | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Standard Routing No. | Standard Routing | 58 | Standard Routing Use | 254 | allows for |
| Part No. | Part | 6 | Standard Routing Use | 254 | allows for |
| Process Plan No. | Process Plan | 415 | Process Plan | 415 | specifies |
| | | | | | |
| MFG/E220 (G1) | TITLE: GLOSSARY: STA | NDARD R | OUTING CALLOUT | NUME | BÉR: 389 |



| ~ | |
|-------|-------|
| Septi | _ |
| æ | 7 |
| O | _ |
| CT | 7 |
| (D | - |
| mber | - |
| O | 4 |
| Ō | 1 |
| H | - |
| | C |
| H | TUUUU |
| in | 7 |
| 83 | 7 |
| V.J | 7 |
| | |

| Entity Class Definition: | The assignment of a part lot, or a portion of a part lot, to a production order for manufacture. |
|--------------------------|--|
| | |

Key Classes: <u>Production Order No.</u>

Owned Attribute Classes:

Name:

Definition:

| | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Production Order No. | Production Order | 57 | Production Order | 57 | has |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | is produced as |
| | | | | | |
| | | | | | |
| | | | 1 | | |
| ODE: MFG/E221 (G1) | TITLE: GLOSSARY: PAF | RT LOT A | SSIGNMENT | NUME | 391 |

393

Entity Class Definition: Reflects the part lot which is the source of a specific serialized part instance.

Key Classes: Part No., Serial No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Owned By Attribute Class(es) Entity Class Name | | Attribute Migration Path | | | |
|--|--------------------------|--------------------------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | is traceable to |
| Part No. | Part | 6 | Serialized Part Instance | 147 | is traceable to |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | is traceable to |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E222 (G1) | TITLE: GLUSSARY: SER | IALIZED F | PART SOURCE LOT | NUMB | BÉR: 393 |

ST 252

USED AT:

AUTHOR: PROJECT: DATE: REV: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 81 Production Sales Order Contract Results In Is Prod. Order No. Contract Prod. Order NODE: TITLE: MFG/E223 NUMBER: CONTRACT PRODUCTION ORDER 394

WORKING

READER

DATE

CONTEXT:

FTR110410000U September 1983

 ∞

Entity Class Definition: A production order which is issued to fulfill one or more contract requirements for a part.

Key Classes: Production Order No.

Owned Attribute Classes:

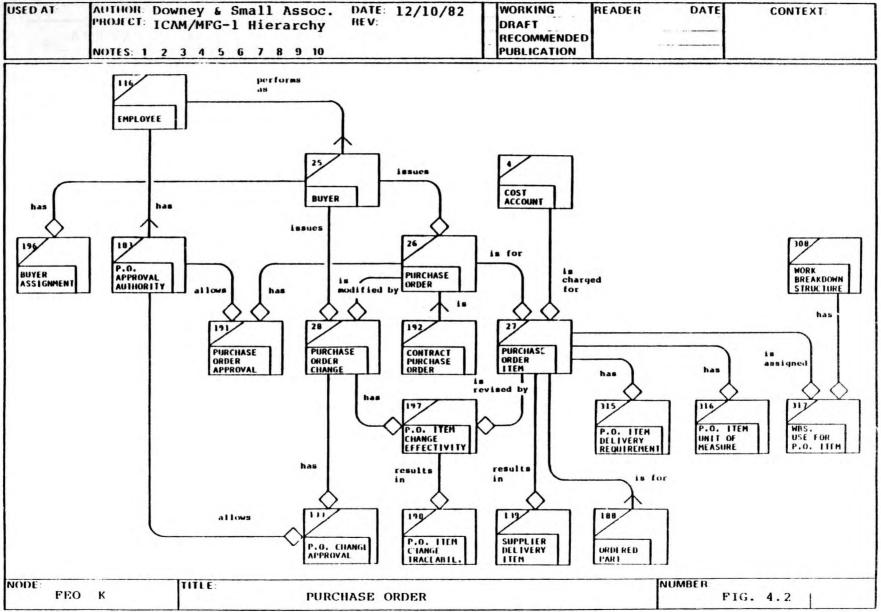
Name:

Definition:

| Inherited Attribute Class Owned Attribute Class(es) Entity Class Name | Attribute Class Owned By | | Attribute Migration Path | | |
|---|---------------------------------|----------|--------------------------------------|----------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Production Order No. Contract No. | Production Order Sales Contract | 57 81 | Production Order Sales Contract | 57 81 | is results in |
| ODE: MFG/E223 (G1) | TITLE: GLOSSARY: CON | TRACT P | PRODUCTION ORDER | NUMB | ER: 395 |

W

\$1252



FTR110410000U September 1983

 ∞

SUPPLIER

FTR110410000U September 1983

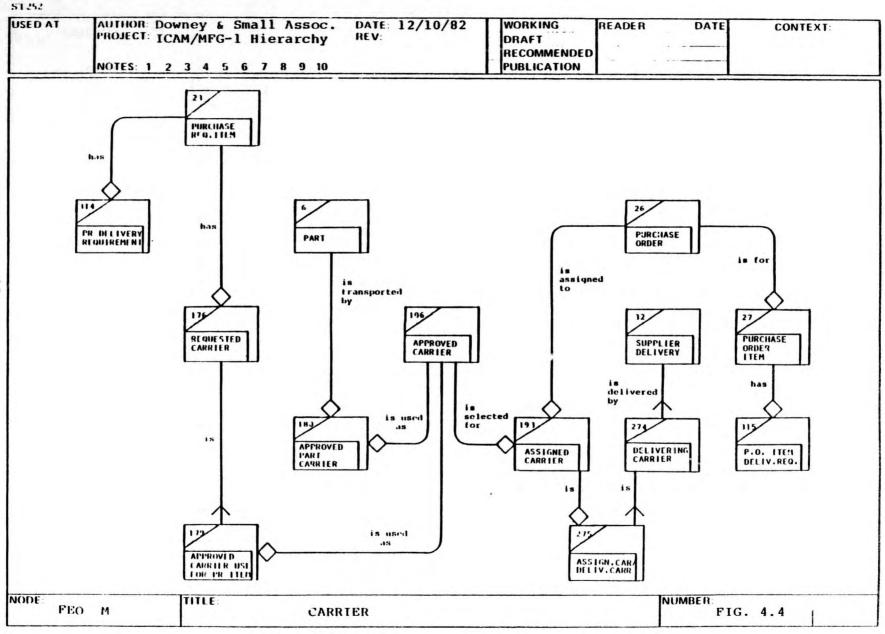
NUMBER

FIG. 4.3

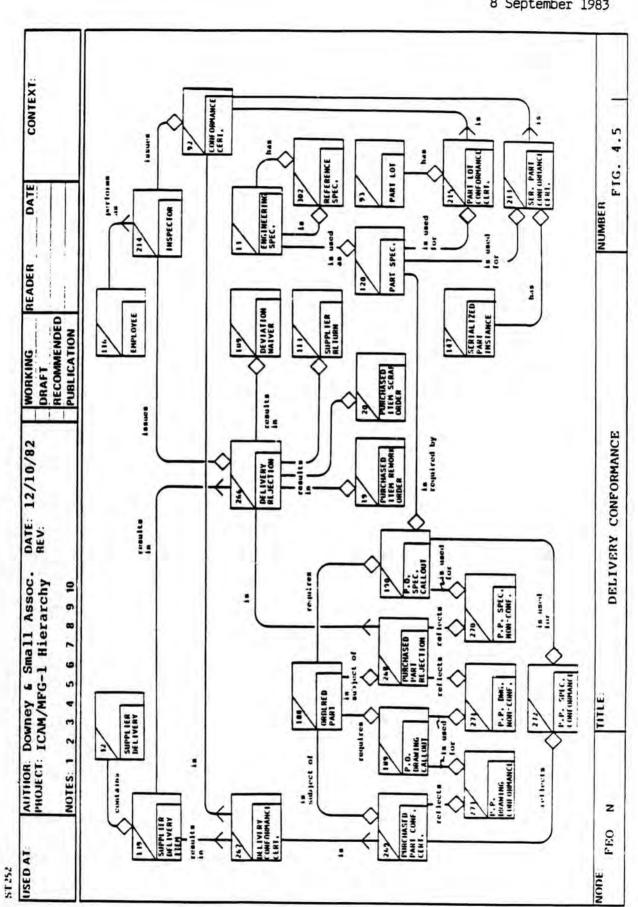
 ∞

FEO L

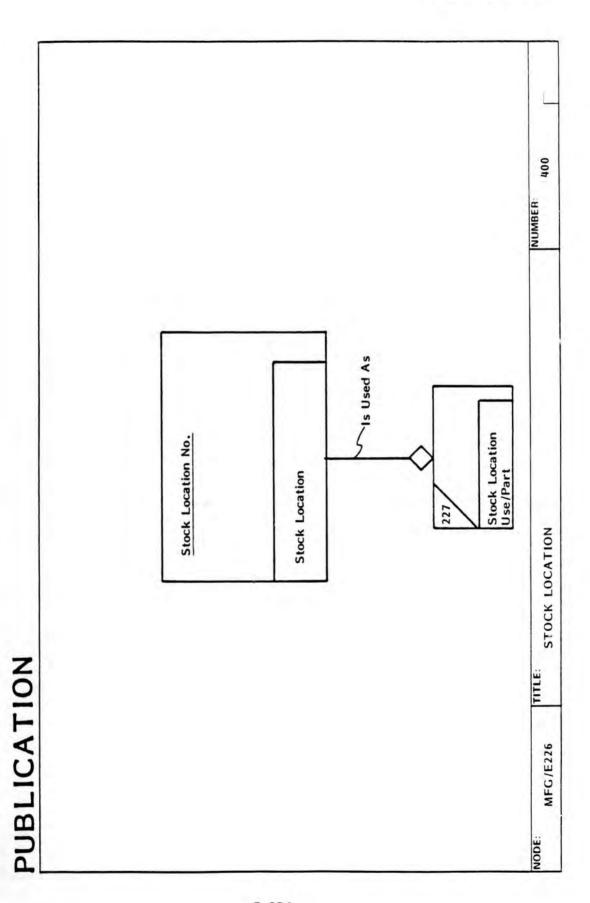
51252



FTR110410000U September 1983

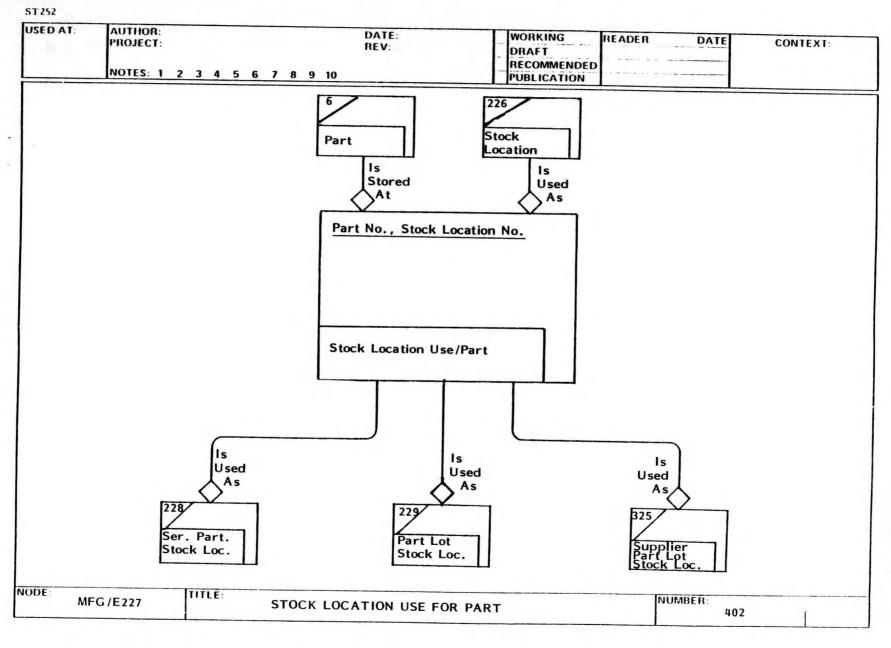


36 2-255



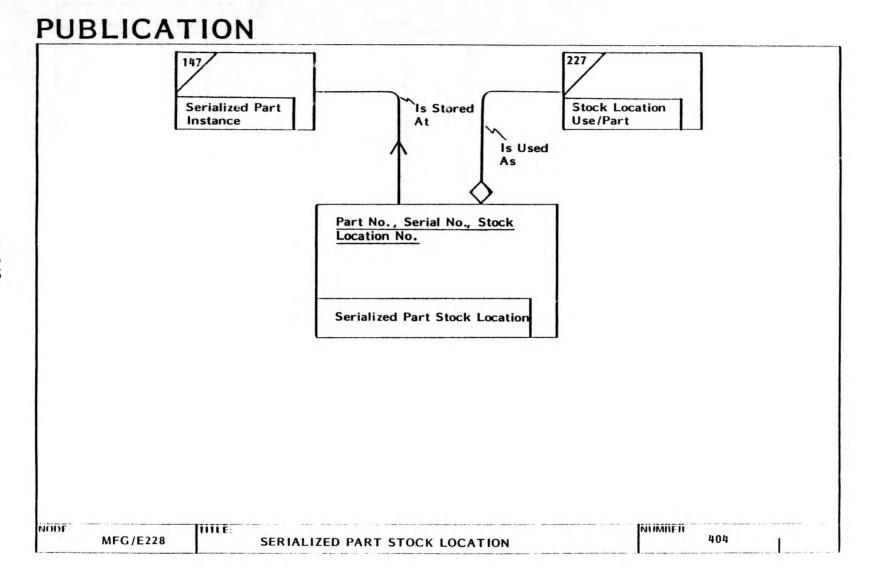
FTR110410000U September 1983

Entity Class Definition: A physical location where parts can be stored. Key Classes: Stock Location No. Owned Attribute Classes: Name: Stock Location No. Definition: A unique number assigned to each location where parts are located. **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name; Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number NODE: MFG/E226 (G1) TITLE: NUMBER: GLOSSARY: STOCK LOCATION 401



FTR110410000U 3 September 1983

| Owned Attribute Cla | isses: | | | | |
|--------------------------------|--|-------------|--|----------------|---|
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | 1 | Attrik | oute Migratio | n Path |
| nherited ttribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | oute Migration | |
| ttribute Class(es) | | Number 6 | | | |
| ttribute Class(es) | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through Relation Class Nam |
| | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through Relation Class Nam is stored at |
| ttribute Class(es) | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through Relation Class Nam is stored at |
| ttribute Class(es) | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through Relation Class Nam is stored at |
| ttribute Class(es) | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through Relation Class Nam is stored at |



Entity Class Definition: The use of a stock location to store a specific serialized part instance.

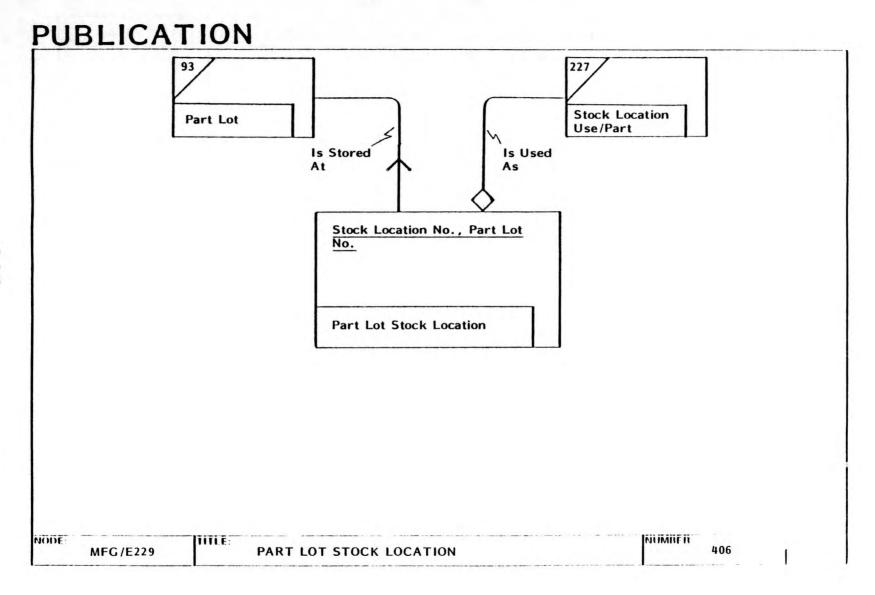
Key Classes: Part No., Serial No., Stock Location No.

Owned Attribute Classes:

Name:

Definition:

| | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part No. | Part | 6 | Serialized Part Instance | 147 | is stored at |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | is stored at |
| Pari No. | Part | 6 | Stock Location Use/Part | 227 | is used as |
| Stock Location No. | Stock Location | 226 | Stock Location Use/Part | 227 | is used as |
| | | | | | |
| ODE: MFG/E228 (G1) | TITLE: GLOSSARY: SER | SIALIZED | PART STOCK LOCATION | NUME | BÉR: 405 |



FTR110410000U September 1983

407

Entity Class Definition: The use of a stock location to store a specific part lot.

Key Classes: Stock Location No., Part Lot No.

Owned Attribute Classes:

Name:

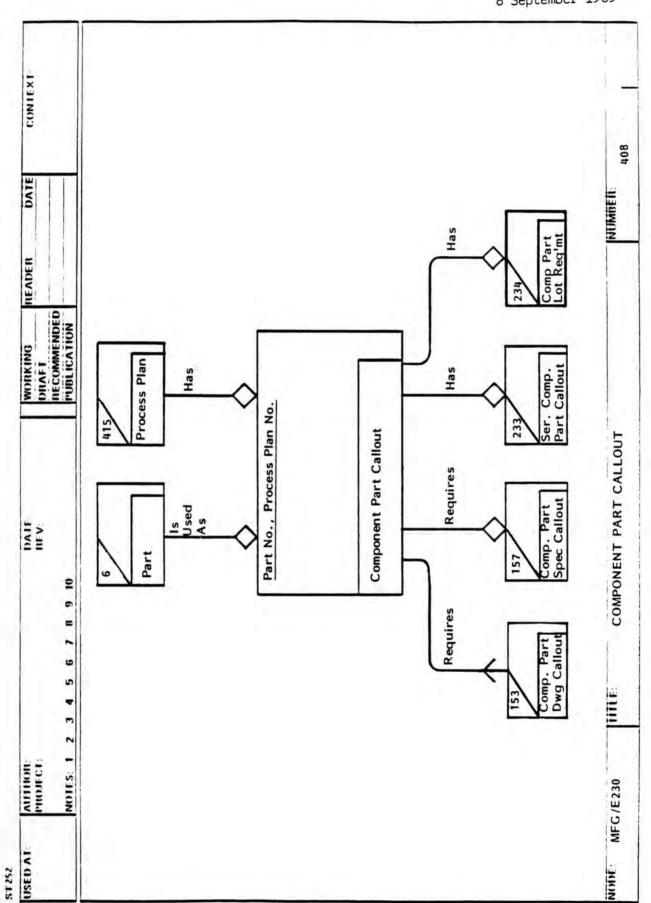
Definition:

MFG/E229 (G1)

| | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------|---------------------------|--------|--------------------------------------|--------|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | is stored at |
| Part No. | Part | 6 | Stock Location Use/part | 227 | is used as |
| Stock Location No. | Stock Location | 226 | Stock Location Use/Part | 227 | is used as |
| | | | | | |
| IODE: | TITLE: CLOSSARY. | | | INUME | ξ _D . |

GLOSSARY: PART LOT STOCK LOCATION

FTR110410000U 8 September 1983



 ∞ FTR110410000U September 1983

Entity Class Definition: An occurrence of a requirement for a part indicated by a process plan which is to be used as an "as is" condition in conjunction with other parts to form an assembly

Key Classes: Process Plan No., Part No.

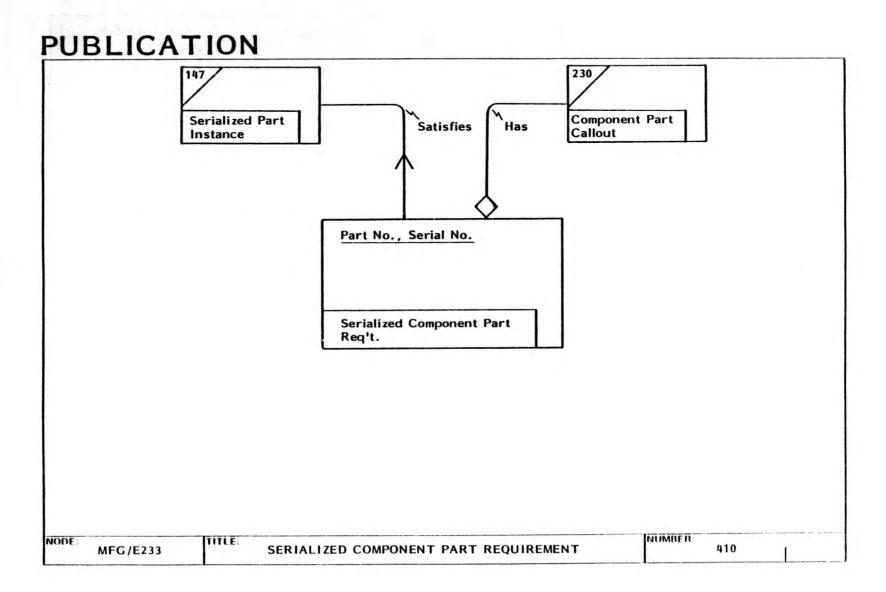
Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class Owned By: Attribute Class(es) Entity Class Name | | Attribute Migration Path | | | |
|---|---------------------|--------------------------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | is used as |
| Process Plan No. | Process Plan | 415 | Process Plan | 415 | has |
| | | | | | |
| MFG/E230 (G1) | TITLE: GLOSSARY: CO | MPONENT | PART CALLOUT | NUME | 3ÉR: 409 |





Entity Class Definition: Reflects a component part callout which specifies a serialized part instance.

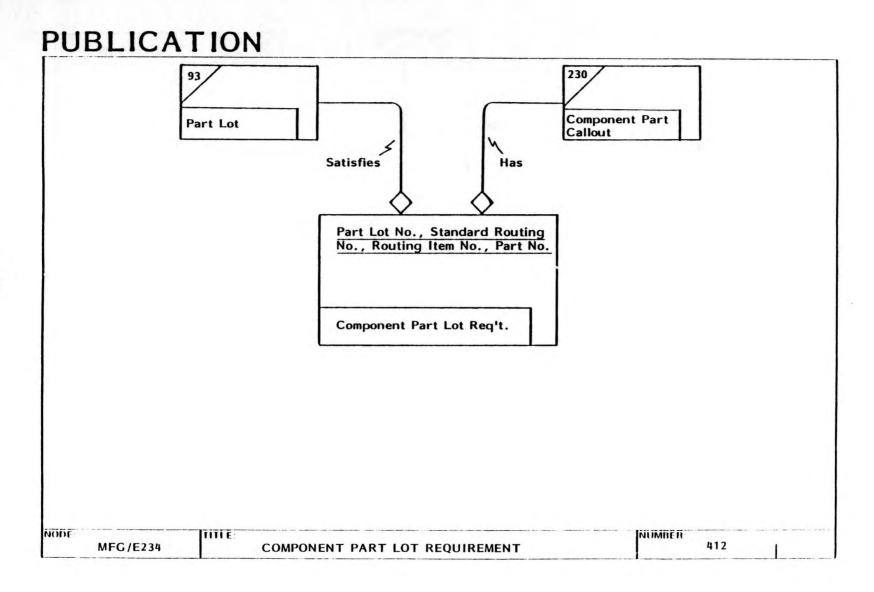
Key Classes: Part No., Serial No.

Owned Attribute Classes:

Name:

Definition:

| All and the second seco | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|--|---------------------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Serialized Part Instance | 147 | satisfies |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | satisfies |
| Standard Routing No. | Standard Routing | 58 | Component Part Callout | 230 | has |
| Routing Item No. | Routing Item | 131 | Component Part Callout | 230 | has |
| Part No. | Part | 6 | Component Part Callout | 230 | has |
| | | | | | |
| ODE: MFG/E233 (G1) | TITLE: GLOSSARY: SERI | ALIZED C UREMENT | OMPONENT PART | NUMB | ÉR: 411 |



Entity Class Definition: Reflects a component part callout which requires a specific part lot.

Key Classes: Part Lot No., Standard Routing No., Routing Item No., Part No.

Owned Attribute Classes:

Name:

Definition:

| | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------|--|--------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | satisfies |
| Standard Routing No. | Standard Routing | 58 | Component Part Callout | 230 | has |
| Routing Item No. | Routing Item | 131 | Component Part Callout | 230 | has |
| Part No. | Part | 6 | Component Part Callout | 2 30 | has |
| DDE: MFG/E234 (G1) | TITLE: GLOSSARY: COM | | PART LOT REQUIREMENT | INUMB | ĒR: |

FTR1104100000 September 1983 ST 252

FTR110410000U September 1983

 ∞

3-2/1

FTR110410000U September 1983

Entity Class Definition: Reflects skills which may be represented by employees in the factory.

Key Classes: Skill Classification

Owned Attribute Classes:

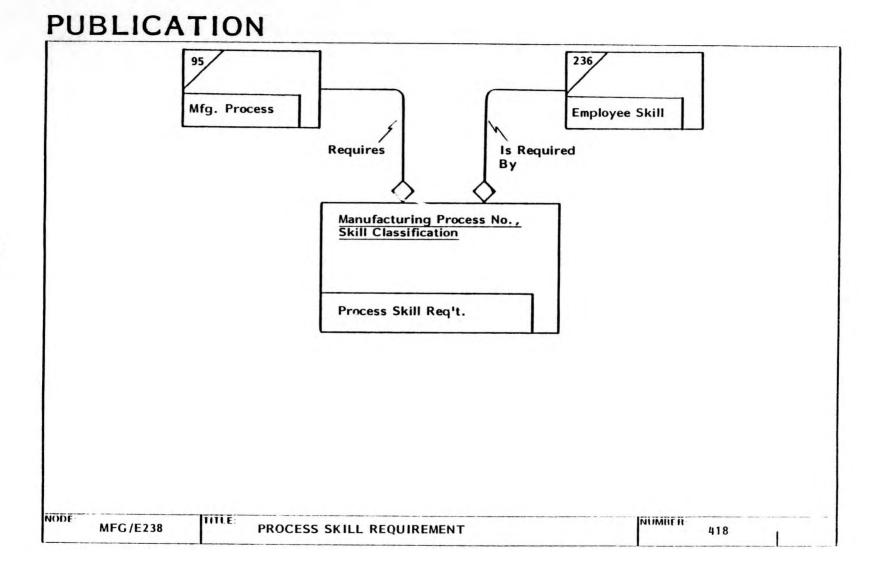
Name: Skill Classification

Definition: The name of the unique skill classification.

| Inherited | ted Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------------------------|-------------------------------|---------|--------------------------------------|---------------|--|
| Attribute Class(es) Entity Class Name | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E236 (G1) | TITLE: GLOSSARY: E | MPLOYEE | SK ILL | NUMB | ER: 415 |

| SED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|---------|---------------------|-----------------------|-------------------|-----------|-----------|----------|
| | AUTHOR: PROJECT: | REV: | DRAFT | - INCADEN | DATE | CONTEXT |
| | | | RECOMMENDE | <u></u> | | |
| | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | PUBLICATION | <u> </u> | | |
| | | | | | | |
| | | 51 | 236 | | | |
| | | | | | | |
| | | F | | | | |
| | | Equipment | Employee Skill | | | |
| | | <u> </u> | SKIII | | | |
| | | Requires | Is | | | |
| | | Requires | Required | | | |
| | | \Diamond | Ву | | | |
| | | | | | | |
| | | Equip. Descr., Sk | ill Class. | | | |
| | | | | | | |
| | | 1 | 1 | | | |
| | | | 1 | | | |
| | | 1 | | | | |
| | | | 1 | | | |
| | | 1 | 1 | | | |
| | | | | | | |
| | | Environment Strill De | 1 1 | | | |
| | | Equipment Skill Re | eq·mt. | | | |
| | | | | | | |
| | | - | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 70.F | 1=:=:= | | | | | |
| DDE: | FG/E237 TITLE: | EQUIPMENT SKILL REQU | IDENENT | IN | UMBER: 41 | |

Entity Class Definition: Reflects specific skills which are required by an individual equipment type. Key Classes: Equipment Description, Skill Classification **Owned Attribute Classes:** Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number Equip. Description Equipment 51 Equipment 51 requires **Skill Classification Employee Skill Employee Skill** 236 is required by 236 NODE: TITLE: NUMBER: MFG/E237 (G1) GLOSSARY: EQUIPMENT SKILL REQUIREMENT 417



Entity Class Definition: Reflects skills which are required by an individual process.

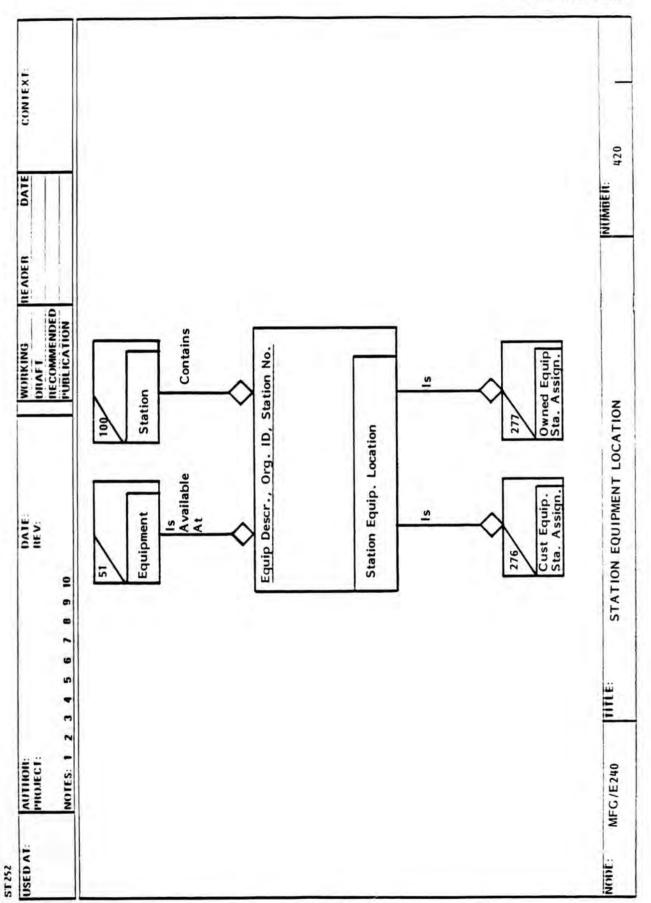
Key Classes: Manufacturing Process No., Skill Classification

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | | |
|----------------------|--|-------------------------------------|--------------------------------------|--------|---|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Mfg. Process No. | Mfg. Process | 95 | Mfg. Process | 95 | requires | |
| Skill Classification | Employee Skill | 236 | Employee Skill | 236 | is required by | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| ODE: | TITLE: 0.000.00 | | | INUME | JER: | |
| MFG/E238 (G1) | GLOSSARY: PRO | GLOSSARY: PROCESS SKILL REQUIREMENT | | | 419 | |



Entity Class Definition: Reflects the current location of equipment at a specific station.

Entity Class Synonyms: Work Station Equipment Location

Key Classes: Organization ID, Station No., Equipment Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | | |
|---------------------|--|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Equip. Description | Equipment | 51 | Equipment | 51 | is current available at | |
| Organization ID | Organization | 422 | Station | 100 | contains | |
| Station No. | Station | 100 | Station | 100 | contains | |
| | | | | | | |
| | | | | | | |
| ODE: MFG/E240 (G1) | TITLE: GLOSSARY: STA | TION EQU | JIPMENT LOCATION | NUMB | ER: 421 | |

FTR110410000U September 1983

-278

Entity Class Definition: Reflects the capacity to perform a particular process at a work station.

Key Classes: Organization ID, Station No., Manufacturing Process No.

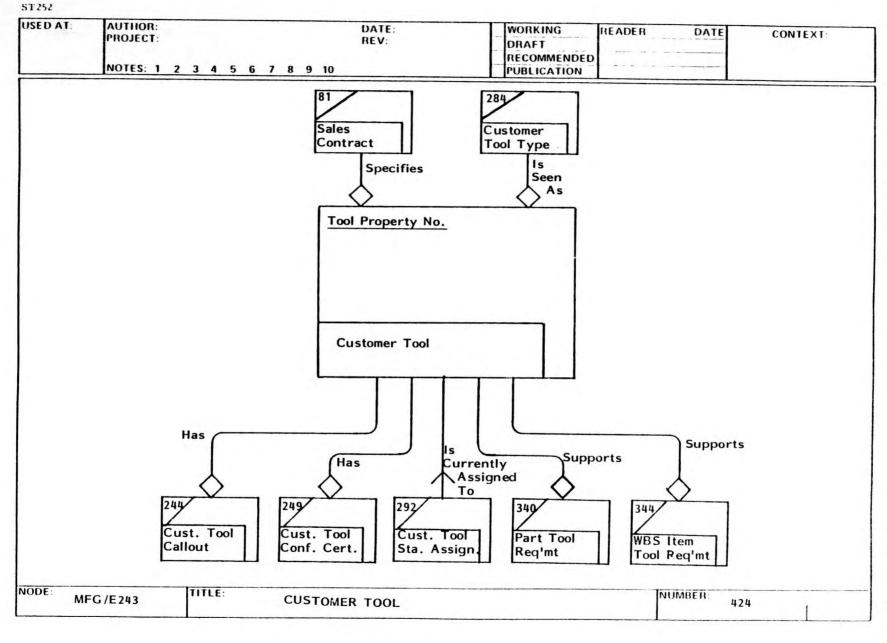
Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | | |
|---------------------|--|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Mfg. Process No. | Mfg. Process | 95 | Mfg. Process | 95 | is performed at | |
| Organization ID | Organization | 422 | Station | 100 | performs | |
| Station No. | Station | 100 | Station | 100 | performs | |
| | | | | | 17 | |
| | | | | | | |
| | | | | 13.1 | | |
| | | T I | | | | |
| NODE: MFG/E242 (G1) | TITLE: GLOSSARY: STA | TION/PRO | OCESS | NUME | BER: 423 | |

FTR110410000U September 1983



FTR110410000U September 1983

 ∞

Entity Class Definition: A serialized instance of a tool owned by the customer.

Entity Class Synonyms: Contract Tool

Key Classes: Tool Property No.

Owned Attribute Classes:

Name: Tool Property No.

Definition: A unique number assigned to each instance of a controlled customer tool.

Name: Customer Tool Description Definition: The tool name and design specifications

Name: Customer Tool Order No.

Definition: The unique identifier assigned to the document that defines the characteristics of

the tool.

Name: Customer Tool Quantity Definition: The number of tools required to support a given rate of production.

Name: Customer Tool Crew-Size

Definition: The number of people required for optimal use of the tool.

| Inherited | Attribute Class Owned By: | Number | Attribute Migration Path | | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Customer No. | Customer | 1 | Customer Tool Type | 284 | is seen as | |
| Tool Description | Tool Type | 45 | Customer Tool Type | 284 | is seen as | |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | specifies | |
| ODE: MFG/E243 (G1) | TITLE: GLOSSARY: CUS | STOMER T | റെപ് | NUMBÉ | R: 425 | |

Entity Class Definition: Reflects a tool callout which requires a serialized instance of a tool owned by the

customer.

Entity Class Synonyms: Contract Tool Callout

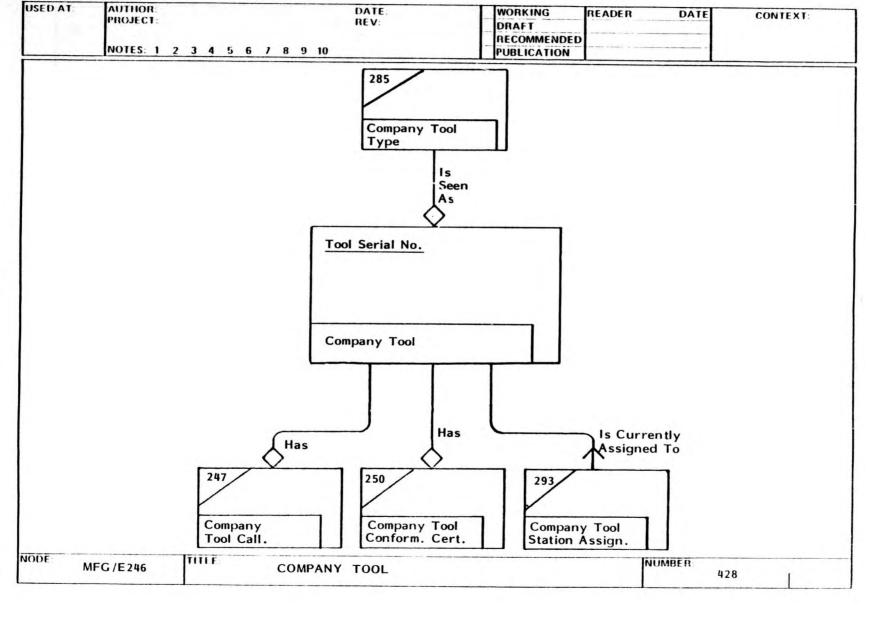
Key Classes: Process Plan No., Line No., Tool Description

Owned Attribute Classes:

Name:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribu | Attribute Migration Path | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------------------------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | is |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | is |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | is |
| Tool Property No. | Customer Tool | 243 | Customer Tool | 243 | has |
| | | | | | |
| ODE: MFG/E244 (G1) | TITLE: GLOSSARY: CUS | STOMER T | OOL CALLOUT | NUMB | ER: 427 |

ST 252



FTR110410000U September 1983

 ∞

September 1983

Entity Class Definition: A serialized instance of a tool owned by the company.

Key Classes: Tool Serial No.

Owned Attribute Classes:

Name: Tool Serial No.

Definition: A unique number assigned to identify an individual tool owned by the company.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Tool Description | Tool Type | 45 | Company Tool Type | 285 | is seen as |
| ODE: MFG/E246 (G1) | TITLE: GLOSSARY: COM | MPANY TO | OOL | NUMB | ER: 429 |

ST 252

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING READE DRAFT | R DATE | CONTEXT |
|----------|---------------------|---|---------------------|-------------|---------|
| | NOTES: 1 2 3 4 5 | Oper. Tool Callout Process Plan No., Descr. Company Tool Call | | | |
| ODE: M | FG/E247 TITLE: | COMPANY TOOL CALLOUT | Г | NUMBER: 430 | · |

FTR110410000U 8 September 1983

FTR110410000U September 1983

Entity Class Definition: Reflects a tool callout which requires a serialized instance of a tool owned by the

company.

Key Classes: Process Plan No., Line No., Tool Description

Owned Attribute Classes:

Name:

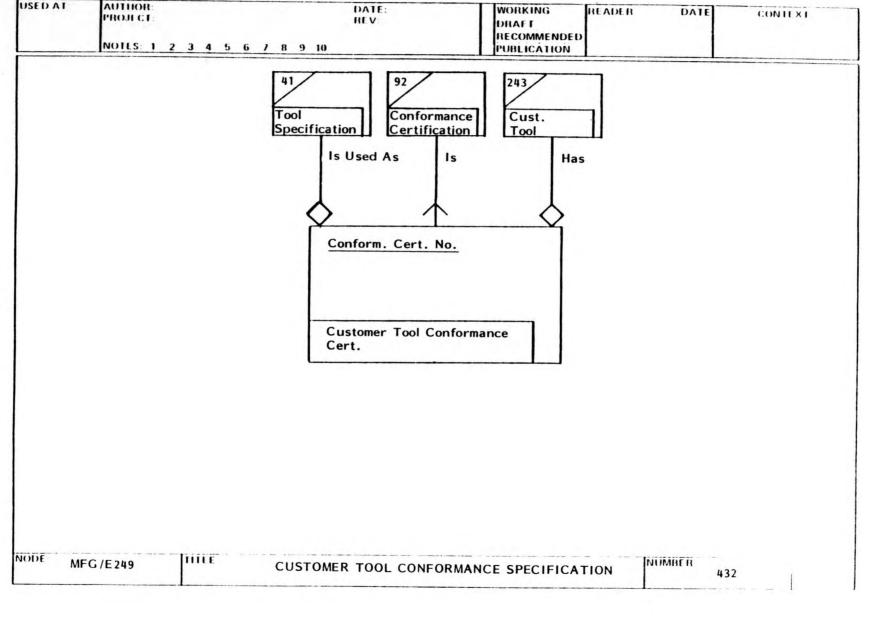
Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | n Path |
|----------------------------------|--|--------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Tool Serial No. | Company Tool | 246 | Company Tool | 246 | has |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | is |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | is |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | is |
| | | | | | |
| IODE: MFG/E247 (G1) | TITLE: GLOSSARY: C | OMPANY | TOOL CALLOUT | NUME | BER: 431 |

ST252

USEDAT

AUTHOR: PROJECT:



WORKING

READER

DATE

CONTEXT

FTR110410000U September 1983

 ∞

Entity Class Definition: A conformance certification which is applicable to a serialized instance of a customer

Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | n Path |
|-------------------------|---------------------------|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Specification No. | Eng. Specification | 13 | Tool Specification | 41 | is used as |
| Conformance Cert. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Tool Property No. | Customer Tool | 243 | Customer Tool | 243 | has |
| Tool Description | Tool Type | 45 | Tool Specification | 41 | is used as |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MEG (Earla (CA) | TITLE: | | | | <u></u> |

NODE: MFG/E249 (G1)

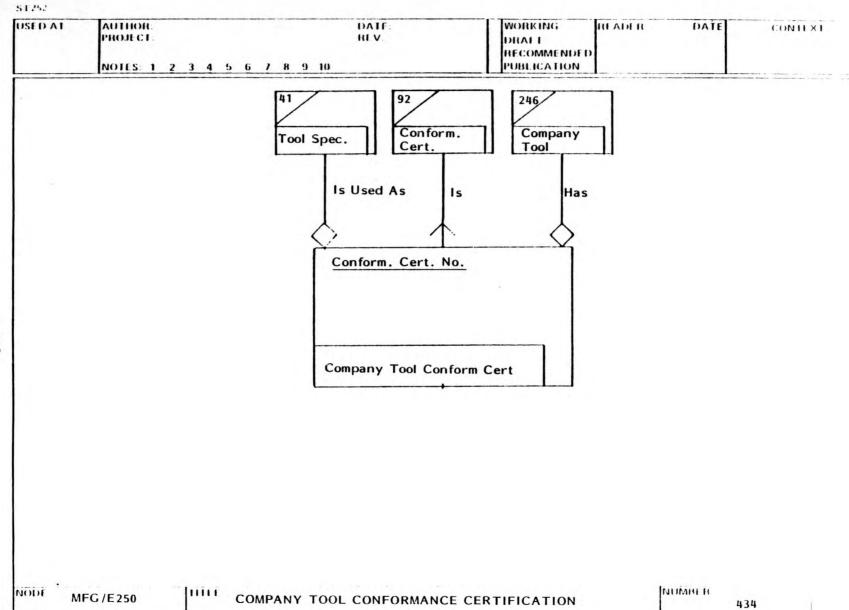
TITLE:

GLOSSARY: CUSTOMER TOOL CONFORMANCE CERT.

NUMBÉR

ER:

433



Entity Class Definition: A conformance certification which is applicable to a serialized instance of a tool owned by the factory.

Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

| | Attribute Class Owned By: | | Attribute Migration Path | | n Path |
|-------------------|---------------------------|---------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Specification No. | Eng. Specification | 13 | Tool Specification | 41 | is used as |
| Tool Description | Tool Type | 45 | Tool Specification | 41 | is used as |
| Conformance Cert. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Tool Serial No. | Company Tool | 246 | Company Tool | 246 | has |
| * | | | | | 7 |
| MFG/E250 (G1) | TITLE: GLOSSARY: COMPA | NY TOOL | CONFORMANCE CERT | . NUME | BER: 435 |

MFG/E251

 ∞

PUBLICATION 161 Equipment Spec. **Equipment Callout** Satisfies Requires Equipment Description, Specification No., Process Plan No., Line No. Equipment Spec. Callout NUMBER NODE TITLE 436

EQUIPMENT SPECIFICATION CALLOUT

Entity Class Definition: Reflects the engineering specification which is to be used to determine acceptability of equipment required by a specific production order item.

Key Classes: Process Plan No., Line No., Equipment Description, Specification No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Equip. Description | Equipment | 51 | Equipment Callout | 98 | requires |
| Equip. Description | Equipment | 51 | Equipment Spec. | 161 | satisfies |
| Specification No. | Eng. Specification | 13 | Equipment Spec. | 161 | satisfies |
| Process Plan No. | Process Plan | 415 | Equipment Callout | 98 | requires |
| Line No. | Planned Mfg. Operation | 421 | Equipment Callout | 98 | requires |
| DDE: MFG/E251 (G1) | TITLE: GLOSSARY: EQUIP | MENT SPE | CIFICATION CALLOUT | NUMB | ER: 437 |

 ∞

Entity Class Definition: Reflects the occurrence of a requirement for an engineering specification which is to be used to determine acceptability of a tool required by a specific production order

item.

Key Classes: Tool Description, Process Plan No., Line No., Specification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------|---------------------------|--------|--------------------------------------|---------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Specification No. | Eng. Specification | 13 | Tool Specification | 41 | satisfies |
| Tool Description | Tool Type | 45 | Tool Specification | 41 | satisfies |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | requires |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | requires |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | requires |
| | | | | | |
| ione. | Tritis. | | 1 | lau mar | |

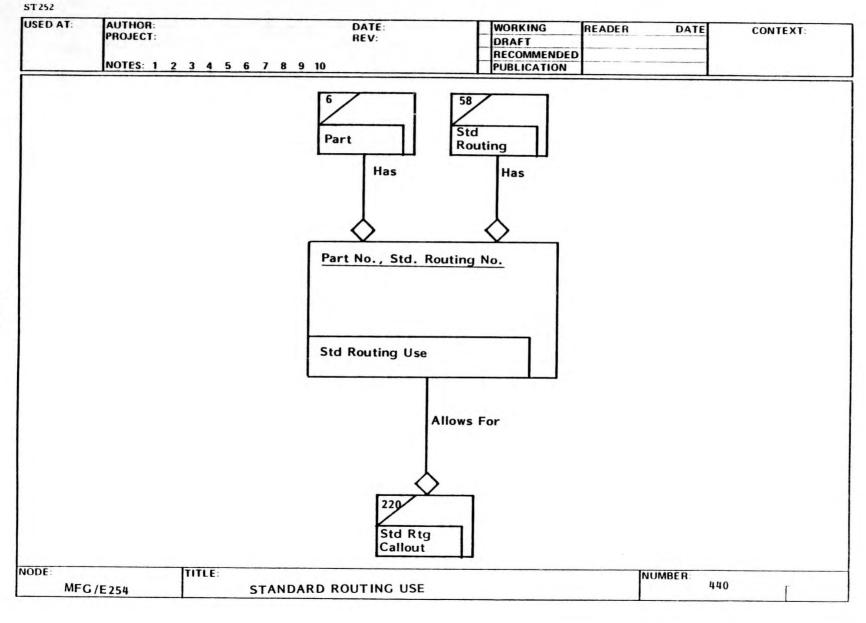
NODE: MFG/E252 (G1)

TLE:

GLOSSARY: TOOL SPECIFICATION CALLOUT

NUMBER:

439



Owned Attribute Classes: Name: **Definition: Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name; Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Part No. Part Part 6 has Standard Routing No. Planned Routing Standard Routing 58 58 has NODE: MFG/E254 (G1) TITLE: NUMBER: STANDARD ROUTING USE GLOSSARY: 441

Entity Class Definition: Reflects the authorization to use a standard routing for a specific part.

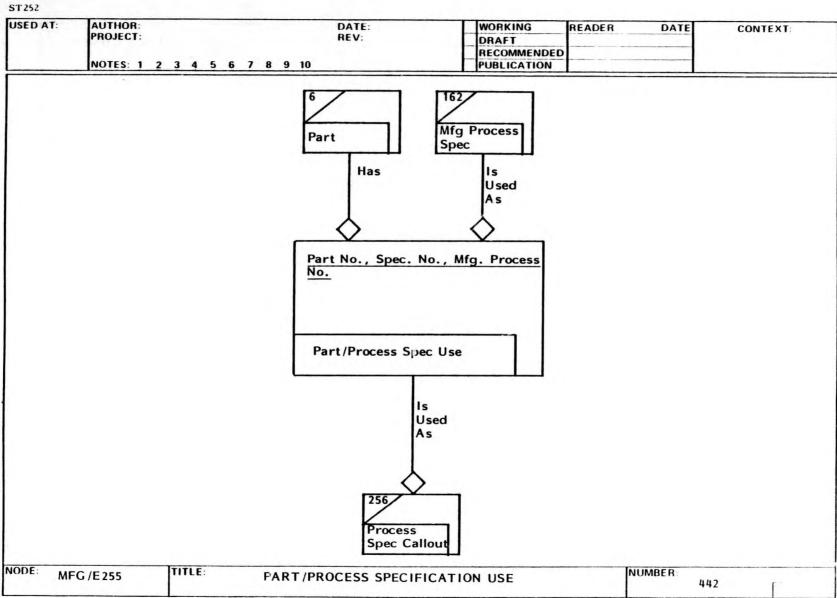
Key Classes: Standard Routing No., Part No.

FTR110410000U September 1983



 ∞

FTR110410000U 3 September 1983



FTR110410000U 8 September 1983

Entity Class Definition: Establishes the use of a process specification for a particular part.

Key Classes: Part No., Manufacturing Process No., Specification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Part No. | Part | 6 | Part | 6 | has |
| Mfg. Process No. | Mfg. Process | 95 | Process Spec. | 162 | is used as |
| Specification No. | Eng. Specification | 13 | Mfg. Process Spec. | 162 | is used as |
| ODE: MFG/E255 (G1) | TITLE: GLOSSARY: PAR | T /PROCE | SS SPECIFICATION USE | NUMB | ER: 443 |

Entity Class Definition: The requirement for a specific process specification called out by a planned manufacturing

operation.

Entity Class Synonyms: Process Standard Mfg., Inst. Callout, Process Spec. Callout

Key Classes: Routing Item No., Part No., Manufacturing Process No., Specification No.

Owned Attribute Classes:

Name:

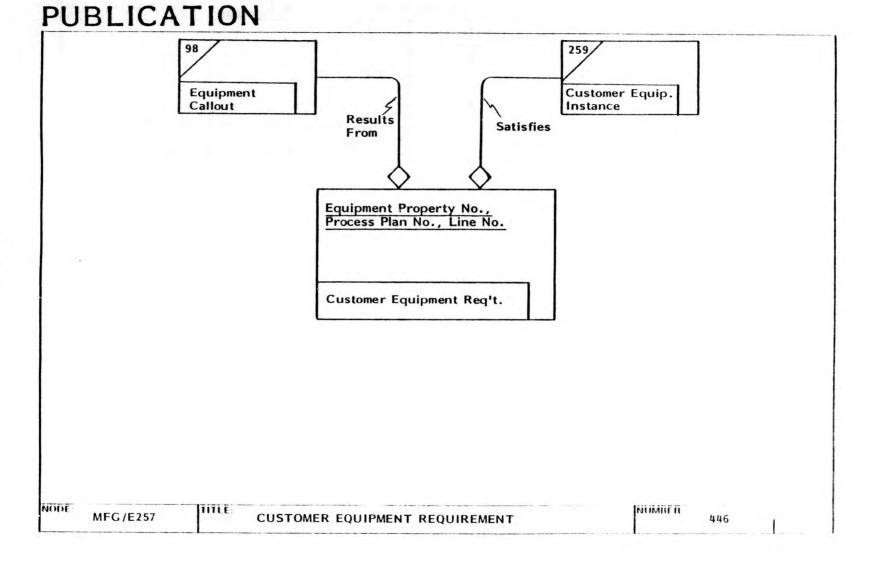
Definition:

| Inherited | Attribute Class Owned By: | | Attrib | ute Migratio | n Path |
|----------------------|---------------------------|--------|--------------------------------------|--------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Routing Item No. | Routing Item | 131 | Routing Item | 131 | has |
| Part No. | Part | 6 | Part/Process Spec. | 255 | is used as |
| Mfg. Process No. | Mfg. Process | 95 | Part/Process Spec. | 255 | is used as |
| Specification No. | Eng. Specification | 13 | Part/Process Spec. | 255 | is used as |
| | | | | | 1 |
| | | | | | |
| ODE: MEC (East) (CA) | TITLE: | | | INITIME | |

MFG/E256 (G1)

GLOSSARY: PROCESS SPECIFICATION CALLOUT

445



447

Entity Class Definition: Reflects an equipment callout which is for a serialized instance of customer owned equipment.

Key Classes: Process Plan No., Line No., Equipment Property No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | Attribute | | e Migration Path | |
|---|--|-------------------------|---|-----------------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Equipment Descrip. Equip. Property No. Process Plan No. Line No. | Equipment Customer Equip. Instance Process Plan Planned Mfg. Operation | 51 259 415 421 | Equipment Callout Cust. Equip. Instance Equipment Callout Equipment Callout | 98 259 98 98 | results from satisfies results from results from |
| DDE: MFG/E257 (G1) | TITLE: GLOSSARY: CUS | TOMER FO | QUIPMENT REQUIREMENT | NUMB | ER: 447 |

GLOSSARY: CUSTOMER EQUIPMENT REQUIREMENT

FTR110410000U September 1983

449

Entity Class Definition: A serialized instance of customer owned equipment.

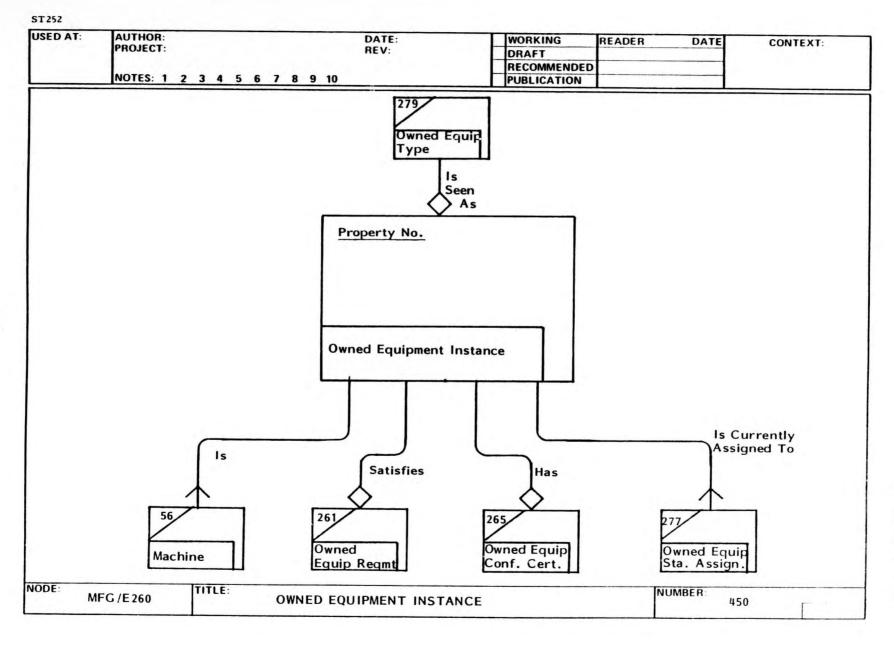
Key Classes: Equipment Property No.

Owned Attribute Classes:

Name: Equipment Property No.

Definition: A unique number assigned to each instance of customer equipment.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Customer No. | Customer | 1 | Cust. Equip. Type | 278 | is seen as |
| Equip. Description | Equipment | 51 | Cust. Equip. Type | 278 | is seen as |
| | | | | | |
| DDE: MFG/E259 (G1) | TITLE: GLOSSARY: CUS | STOMER E | QUIPMENT INSTANCE | NUMB | ER: 449 |



FTR110410000U September 1983

FTR110410000U September 1983

Entity Class Definition: A serialized instance of equipment owned by the factory.

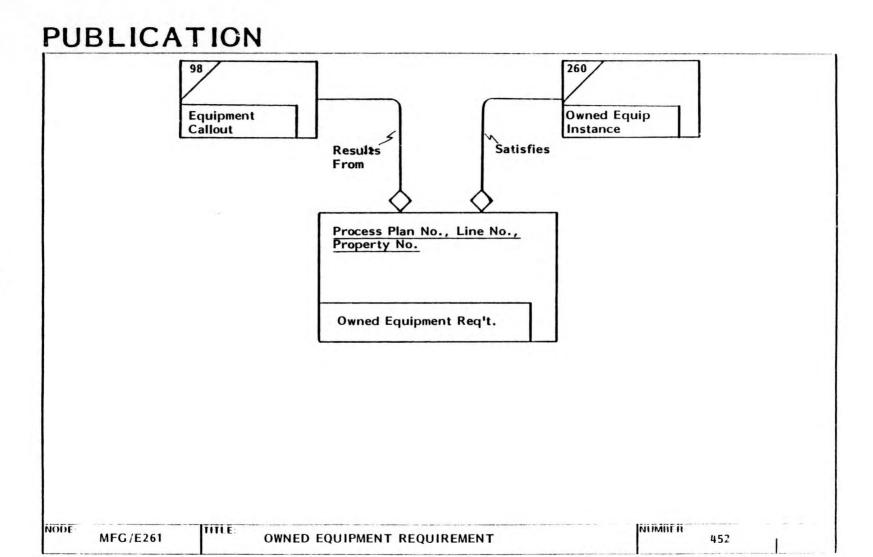
Key Classes: Property No.

Owned Attribute Classes:

Name: Property No.

Definition: A unique number assigned to each instance of owned equipment.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Equip. Description | Equipment | 51 | Owned Equipment Type | 279 | is seen as |
| ODE: MFG/E260 (G1) | TITLE: GLOSSARY: OW | NED EQUI | PMENT INSTANCE | NUMB | ÉR: 451 |



Entity Class Definition: Reflects an equipment callout which is for a serialized instance of equipment owned by the factory.

Key Classes: Process Plan No., Line No., Property No.

Owned Attribute Classes:

Name:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Property No. | Owned Equipment Instance | 260 | Owned Equip. Instance | 260 | satisfies |
| Equip. Description | Equipment | 51 | Equipment Callout | 98 | results from |
| Process Plan No. | Process Plan | 415 | Equipment Callout | 98 | results from |
| Line No. | Planned Mfg. Operation | 421 | Equipment Callout | 98 | results from |
| | | | | | |
| NODE: MFG/E261 (G1) | TITLE: GLOSSARY: OW | NED EQUI | PMENT REQUIREMENT | NUME | BÉR: 453 |

FTR110410000U 8 September 1983

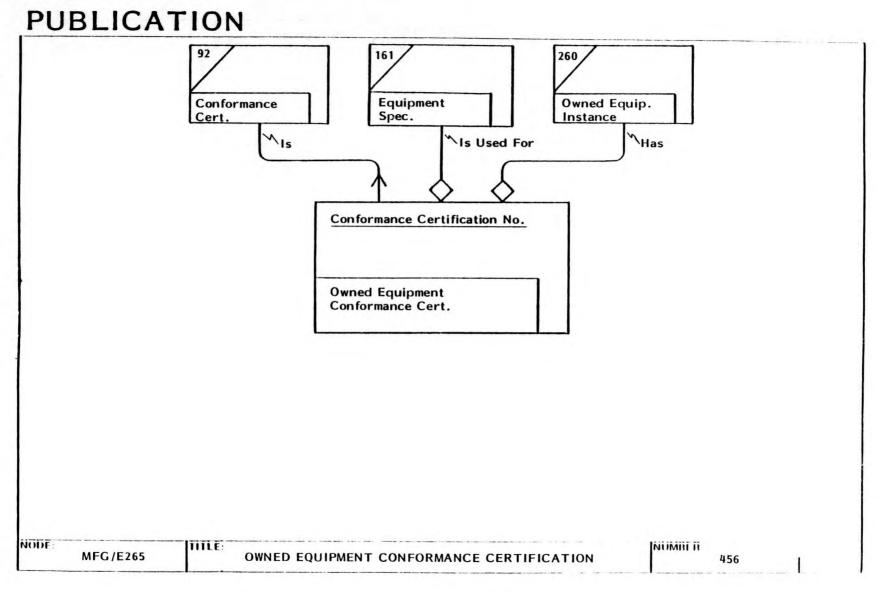
Entity Class Definition: A conformance certification which is for a serialized instance of customer owned equipment.

Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|----------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Conformance Cert. No. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Specification No. | Eng. Specification | 13 | Equipment Spec. | 161 | is used for |
| Equip. Description | Equipment | 51 | Equipment Spec. | 161 | is used for |
| Equip. Property No. | Customer Equip. Instance | 259 | Customer Equip. Instance | 259 | has |
| IODE: MFG/E264 (G1) | TITLE: GLOSSARY: CUS | STOMER E | QUIPMENT CONFORMA | NCE NUMB | BER: 455 |



Entity Class Definition: A conformance certification which is for a serialized instance of equipment owned by the factory.

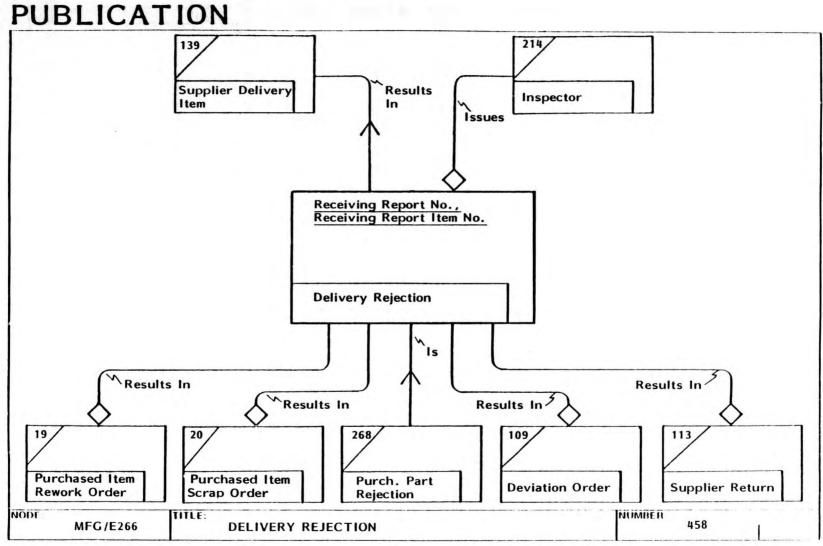
Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribut | te Migration Path | |
|-------------------------------|--|-----------|--------------------------------------|-------------------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Conformance Cert. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| Specification No. | Eng. Specification | 13 | Equipment Spec. | 161 | is used for |
| Equip. Description | Equipment | 51 | Equipment Spec. | 161 | is used for |
| Property No. | Owned Equip. Instance | 260 | Owned Equip. Instance | 260 | has |
| ODE: MFG/E265 (G1) | TITLE: GLOSSARY: OW | NED EQUII | PMENT CONFORMANCE CI | ERT. | BÉR: 457 |





Entity Class Definition: Reflects the rejection of some portion of a supplier delivery.

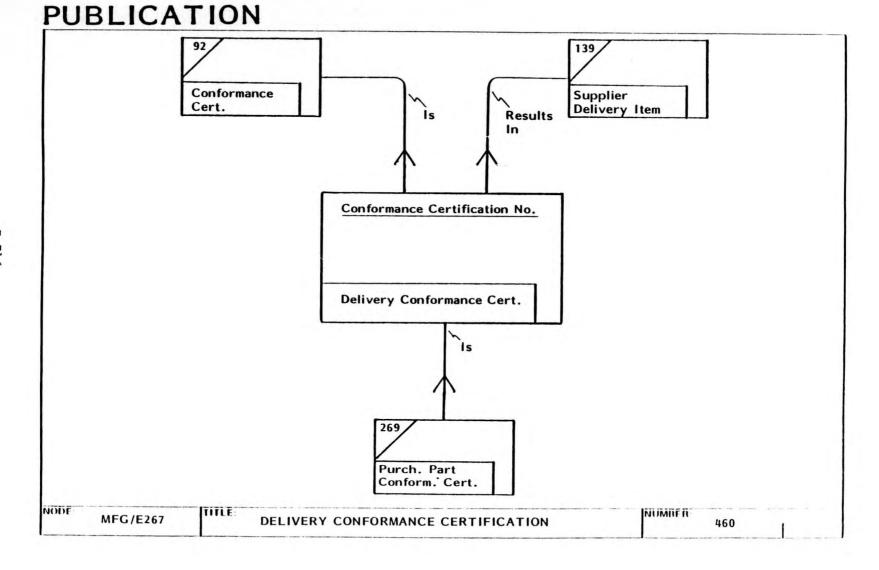
Key Classes: Receiving Report No., Receiving Report Item No.

Name:

Definition:

Owned Attribute Classes:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribu | ite Migration Path | |
|----------------------------------|--|----------|--------------------------------------|--------------------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Receiving Report No. | Supplier Delivery | 32 | Supplier Delivery Item | 139 | results in |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Supplier Delivery Item | 139 | results in |
| Inspector No. | Inspector | 214 | Inspector | 214 | issues |
| | | | | | |
| IODE: MFG/E266 (G1) | TITLE: GLOSSARY: DEL | IVERY RE | JECTION | NUMB | JER: 459 |



Entity Class Definition: A conformance certification for a specific supplier delivery.

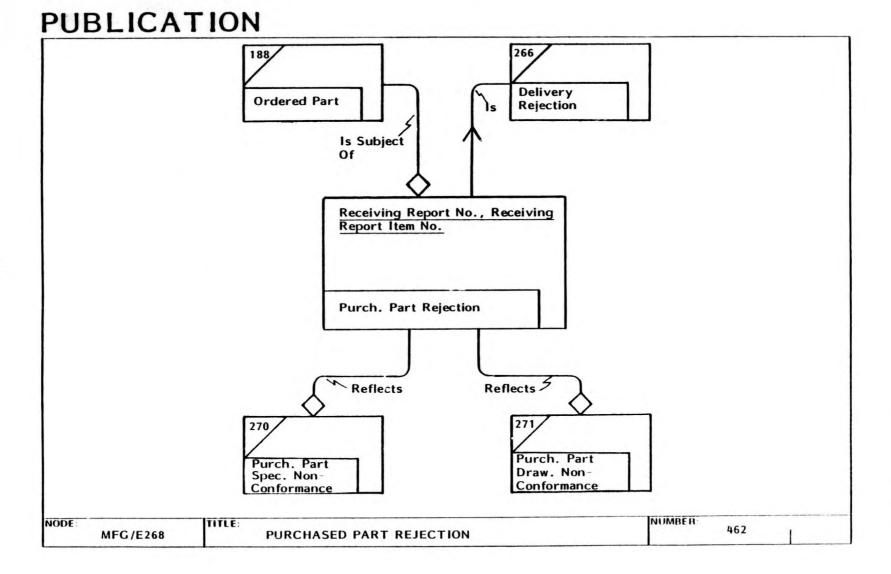
Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--|--|-----------------|---|------------------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Conformance Cert. No. Receiving Report No. Rec. Report Item No. | | 92 32 139 | Conformance Cert. Supplier Del. Item Supplier Del. Item | 92 139 139 | is results in results in |
| ODE: MFG/E267 (G1) | TITLE: GLOSSARY: DE | LIVERY | ONFORMANCE CERTIF | ICATION NUMB | JÉR: 461 |

 ∞



NODE:

MFG/E268 (G1)

TITLE:

FTR110410000U September 1983

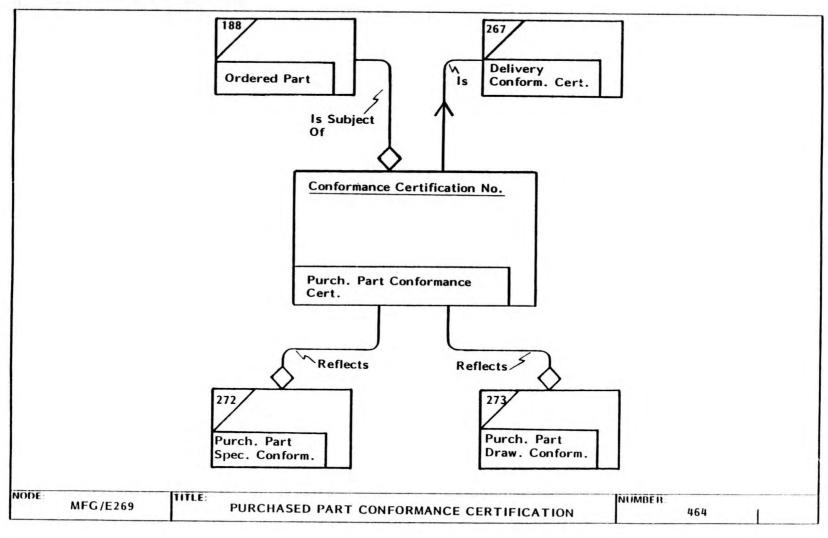
NUMBER:

463

Entity Class Definition: Reflects a supplier delivery rejection which is for a purchased part. Key Classes: Receiving Report No., Receiving Report Item No. Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited Through: Relation Class Name: Inherited From: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Purchase Order No. Purchase Order 26 **Ordered Part** 188 is subject of P.C. Item No. Purchase Order Item Ordered Part is subject of 27 188 Receiving Report No. Supplier Delivery **Delivery Rejection** 32 266 is **Receiving Report** Supplier Delivery Item **Delivery Rejection** Item No. 139 266 is

GLOSSARY: PURCHASED PART REJECTION

PUBLICATION



Entity Class Definition: Reflects a conformance certification which is for a purchased part. Key Classes: Conformance Certification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------|---------------------------|---------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Order No. | Purchase Order | 26 | Ordered Part | 188 | is subject of |
| Purchase Order Item No. | Purchase Order Item | 27 | Ordered Part | 188 | is subject of |
| Conformance Cert. No. | Conformance Cert. | 92 | Conformance Cert. | 92 | is |
| | | | | | |
| ODE: MFG/E269 (G1) | OLOSSAKI. | RCHASED | I PART | NUMB | BER: 465 |

PURCHASED PART

CONFORMANCE CERTIFICATION

NUMBER:

465

FTR110410000U September 1983

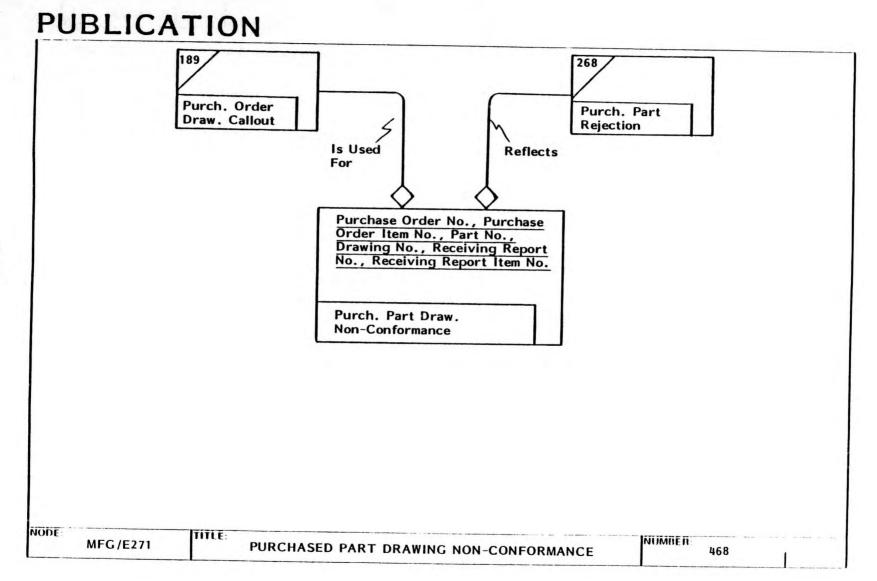
Entity Class Definition: Reflects the part specification which a purchased part has failed to conform to.

Key Classes: Purchase Order No., Purchase Order Item No., Part No., Specification No., Receiving Report No., Receiving Report Item No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|------------------------------|---------------------------|---------------------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Purchase Order No. | Purchase Order | 26 | P.O. Spec. Callout | 190 | is used for | |
| P.O. Item No. | Purchase Order Item | 27 | P.O. Spec. Callout | 190 | is used for | |
| Part No. | Part | 6 | P.O. Spec. Callout | 190 | is used for | |
| Specification No. | Eng. Specification | 13 | P.O. Spec. Callout | 190 | is used for | |
| Receiving Report No. | Supplier Delivery | 32 | Purchase Part Rejection | 268 | reflects | |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Purchase Part Rejection | 268 | reflects | |
| ODE: MFG/E270 (G1) | | CHASED F -CONFOR | I PART SPEC. MANCE | NUMB | BÉR: 467 | |



Entity Class Definition: Reflects the part drawing which a purchased part has failed to conform to.

Key Classes: Purchase Order No., Purchase Order Item No., Part No., Drawing No., Receiving Report No., Receiving Report Item No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|------------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Purchase Order No. | Purchase Order | 26 | P.O. Draw. Callout | 189 | is used for | |
| P.O. Item No. | Purchase Order Item | 27 | P.O. Draw. Callout | 189 | is used for | |
| Part No. | Part | 6 | P.O. Draw. Callout | 189 | is used for | |
| Drawing No. | Released Eng. Drawing | 12 | P.O. Draw. Callout | 189 | is used for | |
| Receiving Report No. | Supplier Delivery | 32 | Purchase Part Rejection | 268 | reflects | |
| Receiving Report Item No. | Supplier Delivery Item | 139 | Purchase Part Rejection | 268 | reflects | |
| ODE: MFG/E271 (G1) | | RCHASE I | I PART DRAWING RMANCE | NUMB | 469 T | |

NODE:

 ∞

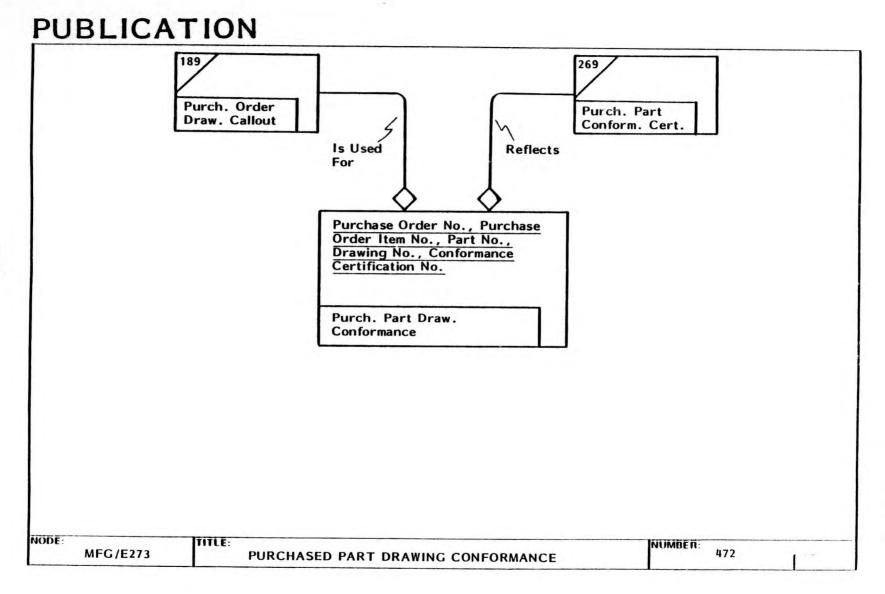
Entity Class Definition: Reflects the part specification which a purchased part conforms to.

Key Classes: Purchase Order No., Purchase Order Item No., Part No., Specification No., Conformance Certification No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------|---------------------------|---------------------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Purchase Order No. | Purchase Order | 26 | P.O. Spec. Callout | 190 | is used for | |
| P.O. Item No. | Purchase Order Item | 27 | P.O. Spec. Callout | 190 | is used for | |
| Part No. | Part | 6 | P.O. Spec. Callout | 190 | is used for | |
| Specification No. | Eng. Specification | 13 | P.O. Spec. Callout | 190 | is used for | |
| Conformance Cert. No. | Conformance Cert. | 92 | Purchased Part Conformance Cert. | 269 | reflects | |
| ODE: MFG/E272 (G1) | | RCHASED ECIFICAT | PART ION CONFORMANCE | NUMB | BER: 471 | |



473

Entity Class Definition: Reflects the part drawing which a purchased part conforms to.

Key Classes: Purchase Order No., Purchase Order Item No., Part No., Drawing No., Conformance Certification No.

Owned Attribute Classes:

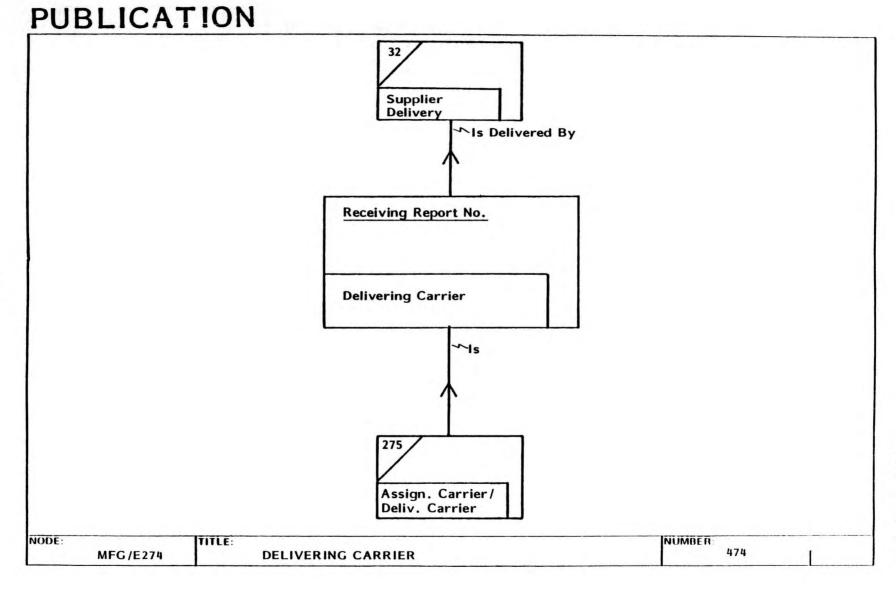
Name:

Definition:

MFG/E273 (G1)

| Inherited | Attribute Class Owned By | | Attribute Migration Path | | | |
|-----------------------|--|--------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Purchase Order No. | Purchase Order | 26 | P.O. Draw. Callout | 189 | is used for | |
| P.O. Item No. | Purchase Order Item | 27 | P.O. Draw. Callout | 189 | is used for | |
| Part No. | Part | 6 | P.O. Draw. Callout | 189 | is used for | |
| Drawing No. | Released Eng. Drawing | 12 | P.O. Draw. Callout | 189 | is used for | |
| Conformance Cert. No. | Conformance Cert. | 92 | Purchase Part Conformance Cert. | 269 | reflects | |
| IODE: | TITLE: CLOSCADY TUD | | RT DRAWING CONFORM | INUME | BER: | |

GLOSSARY: PURCHASE PART DRAWING CONFORMANCE



FTR110410000U 8 September 1983

| Key Classes: <u>Receiv</u> Owned Attribute Clas Name: Definition: | | | | | |
|--|--|-----------|--|----------------|--|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | bute Migration | n Path Inherited Through: Relation Class Name: |
| Receiving Report No. | Supplier Delivery | 32 | Supplier Delivery | 32 | is delivered by |
| ODE: MFG/E274 (G1) | TITLE: GLOSSARY: DELI | IVERING (| CARRIER | NUMBI | JÉR: 475 |

Entity Class Definition: Reflects the use of an assigned carrier as the delivering carrier.

Key Classes: Receiving Report No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | 1077 | Attribute Migration Path | | |
|-------------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Purchase Order No. | Purchase Order | 26 | Assigned Carrier | 193 | is |
| Carrier No. | Approved Carrier | 106 | Assigned Carrier | 193 | is |
| Receiving Report No. | Supplier Delivery | 32 | Delivering Carrier | 274 | is |
| ODE: MFG/E275 (G1) | | GNED CA | RRIER USED AS | NUME | BÉR: 477 |

| ST 252 | | | | | | | | | |
|----------|-----------------------------------|-----------|---------------------|-------------|---|------------|------------|----------|--|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 | 3 4 5 6 7 | DATE: REV: | | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT: | |
| | | | Station Equip. Loc. | lns | st. Equip tance | ntly To | | | |
| | | | Cust. Equip. Sta | ation Assig | gn. | | | | |
| | | | | | | | | | |
| IODE; | MFG /E 276 | TITLE: C | USTOMER EQUIPMENT | STATION | ASSIGNMENT | . Ni | JMBER: 478 | Γ | |

Entity Class Definition: Reflects the assignment of a serialized instance of customer owned equipment to a specific work station.

Key Classes: Equipment Property No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; | |
| Equip. Description | Equipment | 51 | Station Equip. Location | 240 | is | |
| Equipment Property No. | Customer Equip. Instance | 259 | Customer Equip. Instance | 259 | is currently assigned to | |
| Organization ID | Organization | 422 | Station Equip. Loc. | 240 | is | |
| Station No. | Station | 100 | Station Equip. Loc. | 240 | is | |
| IODE: MFG/E276 (G1) | | STOMER E | QUIPMENT | NUMB | ER: 479 | |

| ISED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 | DATE: REV: | WORKING READER DRAFT RECOMMENDED PUBLICATION | R DATE | CONTEXT: |
|----------|---|---------------------------------------|--|--------|----------|
| | | Station Equip. Loc. Is Property No. | Owned Equip Instance Is Currently Assigned To | | |
| | | Owned Equip. Stat | ion Assign. | | |
| | | | | | |

Entity Class Definition: Reflects the assignment of a serialized instance of equipment owned or leased by the factory to a specific work station.

Key Classes: Property No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|----------------------------------|------------------------------------|-----------|---|------------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Equip. Description Property No. | Equipment Owned Equipment Instance | 51 260 | Station Equip. Location Owned Equip. Instance | 240 260 | is is currently assigned to | |
| Organization ID Station No. | Organization Station | 100 | Station Equip. Location Station Equip. Location | 240 240 | is | |
| ODE: MFG/E277 (G1) | TITLE: GLOSSARY: OWNE | D EQUIPA | MENT STATION ASSIGN. | NUMB | ÉR: 481 | |

FTR110410000U 8 September 1983

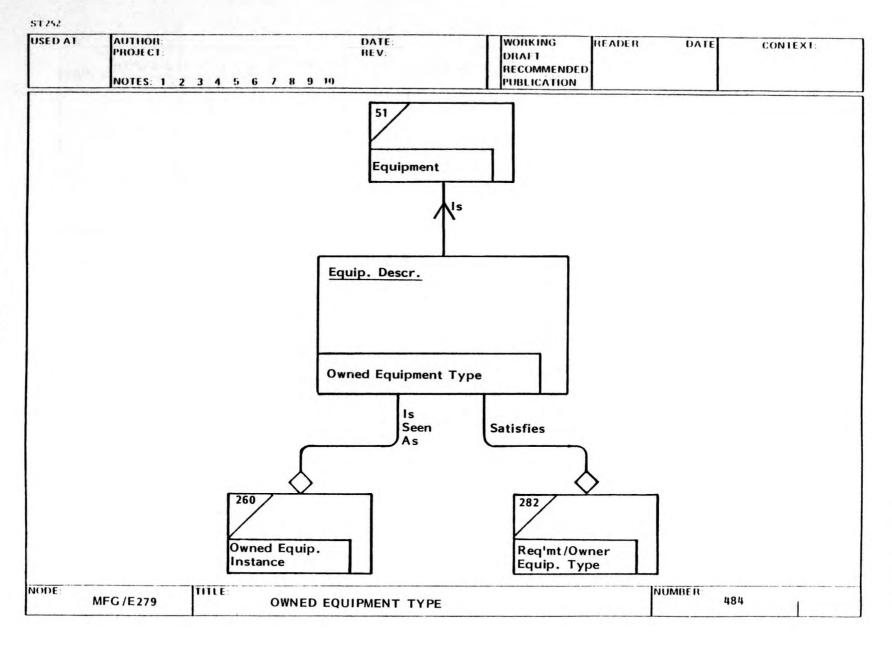
Entity Class Definition: An equipment type which is owned by the customer.

Key Classes: Customer No., Equipment Description

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|---------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Customer No. | Customer | 1 | Customer | 1 | provides |
| Equip. Description | Equipment | 51 | Equipment | 51 | is |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E278 (G1) | GLOSSARY: CUS | TOMER E | QUIPMENT TYPE | NUME | BÉR: 483 |



 ∞

NODE:

MFG/E279 (G1)

FTR110410000U September 1983

NUMBER:

485

| Owned Attribute Cla Name: Definition: | sses: | | | | |
|---|---------------------------|--------|--------------------------------------|---------------|--|
| | | | | | |
| Inherited | Attribute Class Owned By: | T | Attrib | oute Migratio | n Path |
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Equip. Description | Equipment | 51 | Equipment | 51 | is |
| | | | | | |
| | | | | | |
| | | | | | |

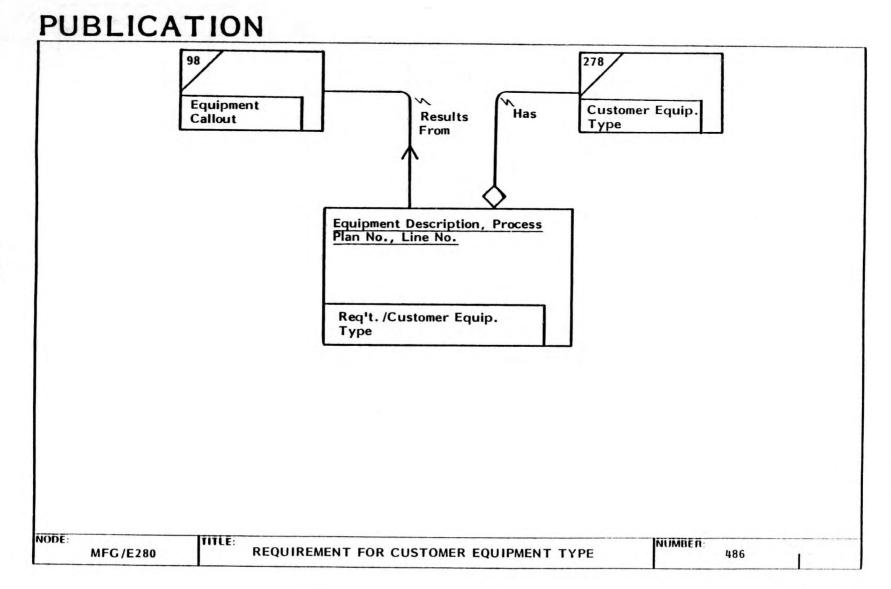
OWNED EQUIPMENT TYPE

Entity Class Definition: An equipment type which is owned by the factory.

Key Classes: Equipment Description

TITLE:

GLOSSARY:



Entity Class Definition: An equipment callout for a customer owned equipment type.

Key Classes: Process Plan No., Line No., Equipment Description

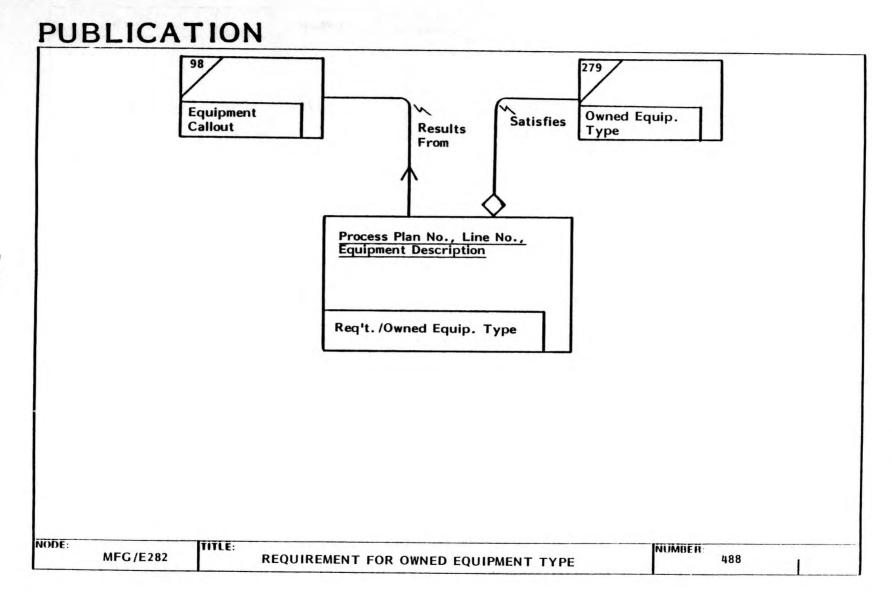
Owned Attribute Classes

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|--|--|-----------------------------|--|-----------------------|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Process Planning No. Line No. Equip. Description Customer No. Equip. Description | Process Plan Planned Mfg. Operation Equipment Type Customer Equipment Type | 415 421 51 1 51 | Equipment Callout Equipment Callout Equipment Callout Customer Equip. Type | 98 98 98 278 | results from results from results from has |
| NODE: MFG/E280 (G1) | TITLE: GLOSSARY. REQU | | Customer Equip. Type FOR CUSTOMER | 278 | has ER: 487 |

FTR110410000U September 1983



Entity Class Definition: Reflects an equipment callout which is for an equipment type owned by the factory.

Key Classes: Process Plan No., Line No., Equipment Description

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | | |
|--|---|------------------------|---|-----------------------|--|--|
| | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Process Plan No. Line No. Equip. Description Equip. Description | Process Plan Planned Mfg. Operation Equipment Equipment | 415 421 51 51 | Equipment Callout Equipment Callout Equipment Callout Owned Equip. Type | 98 98 98 279 | results from results from results from satisfies | |
| ODE: MFG/E282 (G1) | TITLE: GLOSSARY: REQU | IREMENT PMENT TY | FOR OWNED | NUMB | ER: 489 | |

September 198

CUSTOMER TOOL TYPE

MFG/E284

FTR110410000U September 1983

490

NODE: MFG/E284 (G1)

TITLE:

| ∞ | |
|-----------|-----------|
| September | FTR110410 |
| 1983 | 0000 |

NUMBER:

491

Entity Class Definition: Reflects a tool type which is owned by the customer Key Classes: Customer No., Tool Description **Owned Attribute Classes:** Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name; Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Customer No. Customer Customer provides 1 1 **Tool Description** Tool Type Tool Type 45 45 is

GLOSSARY: CUSTOMER TOOL TYPE

FTR110410000U September 1983

Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name Tool Description** Tool Type Tool Type 45 45 is NODE: MFG/E285 (G1) TITLE: NUMBER: GLOSSARY: COMPANY TOOL TYPE 493

Entity Class Definition: Reflects a tool type which is owned by the company.

Key Classes: Tool Description

Owned Attribute Classes:

FTR110410000U September 1983

| JSED AT: | AUTHOR: | DATE: | WORKING | DEADED | | |
|----------|----------------------|-----------------------|-------------------|--------|-------|---------|
| | PROJECT: | REV: | DRAFT | READER | DATE | CONTEXT |
| | | | RECOMMEND | FD | | |
| | NOTES: 1 2 3 4 5 6 7 | 8 9 10 | PUBLICATION | | | |
| | | P | | | | |
| | | 47 | 284 | | | |
| | | Z | | | | |
| | | Oper. Tool Callout | Customer | | | |
| | | Callout | Tool Type | | | |
| | | Is | | | | |
| | | ļ.° | Has | | | |
| | | | $\langle \rangle$ | | | |
| | | | | | | |
| | | Process Plan No., | Line No., Tool | | | |
| | | Descr. | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | Posts /Courts T | 220000 1 1 1 | | | |
| | | Req't/Customer To | or type | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DE: MEC | G/E286 TITLE: R | EQUIREMENT FOR CUSTO | | Taxa . | MBER: | |

Entity Class Definition: Reflects a tool callout which is for a customer owned tool type.

Key Classes: Process Plan No., Line No., Tool Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|---------------------|--|--------|--------------------------------------|--------|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | is |
| Tool Description | Tool Type | 45 | Cust. Tool Type | 284 | has |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | is |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | is |
| Customer No. | Customer | 1 | Customer Tool Type | 284 | has |
| | | | | | |
| | | | | | |
| IODE. | Trivi e | | | | d |

NODE:

MFG/E286 (G1)

TITLE

GLOSSARY: REQUIREMENT FOR CUSTOMER TOOL TYPE

NUMBE

495

ST 252 USED AT:

AUTHOR: PROJECT: DATE: REV: READER DATE CONTEXT: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 47 285 Company Tool Type Oper. Tool Callout Is Has Process Plan No., Line No., Tool Descr. Req'mt/Company Tool Type NODE: TITLE: MFG/E288 NUMBER: REQUIREMENT FOR COMPANY TOOL TYPE 496

WORKING

FTR110410000U September 1983

 ∞

Entity Class Definition: A tool callout which is for a tool type owned by the company.

Key Classes: Process Plan No., Line No., Tool Description

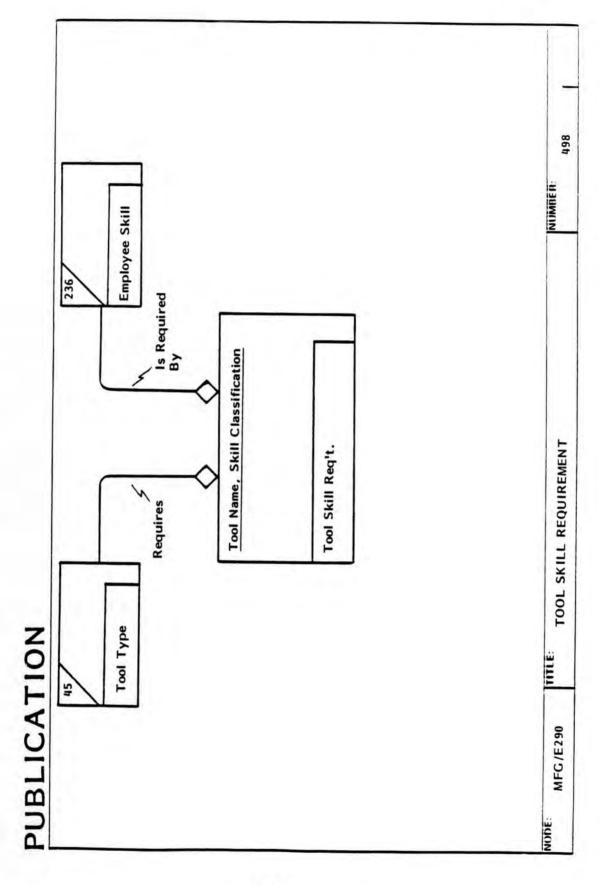
Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | Number | Attribute Migration Path | | |
|---------------------|--|----------|--------------------------------------|---------|--|
| Attribute Class(es) | | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | is |
| Tool Description | Tool Type | 45 | Company Tool Type | 285 | has |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | is |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | is |
| | | | | | |
| IODE: MFG/E288 (G1) | TITLE: GLOSSARY: REQU | JIREMENT | FOR COMPANY TOOL TY | PE NUME | BER: 497 |

FTR110410000U September 1983



FTR110410000U 8 September 1983

499

Entity Class Definition: Reflects the requirement for a specific employee skill to enable the use of a specific tool type.

Key Classes: Tool Description, Skill Classification

Owned Attribute Classes:

Name:

MFG/E290 (G1)

Definition:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|----------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Tool Description | Tool Type | 45 | Tool Type | 45 | requires |
| Skill Classification | Employee Skill | 236 | Employee Skill | 236 | is required by |
| | | | | | |
| | | | | | |
| | | | | | |
| NODE: MEC (E200 (C1) | TITLE: CLOSSARY: TOO | | DECUUDEMENT. | INUME | SER: |

GLOSSARY: TOOL SKILL REQUIREMENT

Entity Class Definition: Reflects the assignment of a tool type to a specific work station.

Key Classes: Organization ID, Station No., Tool Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|-------------------------|---------------------------|----------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Tool Description | Tool Type | 45 | Tool Type | 45 | is currently available at |
| Station No. | Station | 100 | Station | 100 | contains |
| Organization ID | Organization | 422 | Station | 100 | contains |
| | | | | | |
| NODE: MFG/E291 (G1) | TITLE: GLOSSARY: STA | TION/TOO | OL LOCATION | NUME | SÉR: 501 |

CUSTOMER TOOL STATION ASSIGNMENT

FTR110410000U September 1983

NUMBER:

502

NODE:

MFG/E292

TITLE:

Entity Class Definition: Reflects the assignment of a serialized instance of a customer tool to a specific work station.

Key Classes: Tool Property No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|-------------------------|---------------------------|---------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Tool Property No. | Cust. | 243 | Cust. Tool | 243 | is currently assigned to |
| Tool Description | Tool Type | 45 | Station/Tool Location | 291 | is |
| Station No. | Station | 100 | Station/Tool Location | 291 | is |
| Organization ID | Organization | 422 | Station/Tool Location | 291 | is |
| | | | | | |
| | | | | | |
| ODE: MFG/E292 (G1) | TITLE: GLOSSARY: CUST | OMER TO | OL STATION ASSIGNMEN | IT NUMB | SER: 503 |

September 198

ST252

USED AT: AUTHOR: PROJECT: DATE: REV: WORKING DATE READER CONTEXT: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 246 291 Company Station / Tool Tool Location Is Currently Assigned To Is Tool Serial No. Company Tool Station Assign. NODE; TITLE: NUMBER: MFG/E293 COMPANY TOOL STATION ASSIGNMENT 504

Entity Class Definition: Reflects the assignment of a serialized instance of a tool owned by the factory to a specific work station.

Key Classes: Tool Serial No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|-------------------------|---------------------------|----------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Tool Description | Tool Type | 45 | Station/Tool Location | 291 | is |
| Station No. | Station | 100 | Station/Tool Location | 291 | is |
| Tool Serial No. | Company Tool | 246 | Company Tool | 246 | is currently assigned to |
| Organization ID | Organization | 422 | Station/Tool Location | 291 | is |
| NODE: MFG/E293 (G1) | TITLE: GLOSSARY: COM | PANY TOO | DL STATION ASSIGN. | NUME | BÉR: 505 |

| SED AT: | AUTHOR: | DATE: | IWODKING | los apro | 5.55 | |
|---------|------------------|---|-----------------|----------|------------|----------|
| | PROJECT: | REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
| | | | RECOMMENDE | | | |
| | NOTES: 1 2 3 4 5 | 7 8 9 10 | PUBLICATION | | | |
| | | | POBLICATION | | | |
| | | 68 | 93 | | | |
| | | | 13/ | | | |
| | | F DOID | | | | |
| | | Engrn. BOM Item | Part Lot | | | |
| | | rtem | | | | |
| | | | | | | |
| | | Specifies | Has | | | |
| | | \Diamond | \triangle | | | |
| | | | | | | |
| | | Contr. No., End Ite | em Serial No., | | | |
| | | Contr. No., End Ite BOM Item No., Part | Lot No., | | | |
| | | Part No. | | | | |
| | | | 1 | | | |
| | | | 1 | | | |
| | | 1.73 | 1 | | | |
| | | | 1 | | | |
| | | | | | | |
| | | Engrn. BOM Part Lo | t Callout | | | |
| | | Lingthi, Dom Fart Lo | Canout | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DE: | TITLE: | | | 12 | 14655 | |
| MF | G/E294 | ENGINEERING BILL OF MAT | TERIAL PART LOT | CALLOUT | UMBER: 506 | |
| | | | | | 300 | , |

Entity Class Definition: Reflects the use of a specific part lot in the construction of an end item.

Key Classes: Contract No., End Item Serial No., Bill of Material Item No., Part Lot No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribut | te Migratio | n Path |
|------------------------|---------------------------|--------------------|--------------------------------------|-------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Contract No. | Sales Contract | 81 | Engineering BOM Item | 68 | specifies |
| End Item Serial No. | End Item | 5 | Engineering BOM Item | 68 | specifies |
| BOM Item No. | Engineering BOM Item | 68 | Engineering BOM Item | 68 | specifies |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | has |
| Part No. | Part | 6 | Engineering BOM Item | 68 | specifies |
| ODE: MFG/E294 (G1) | | NEERING LOT CAL | BILL OF MATERIAL | NUMB | ÉR: 507 |

ST 252

USED AT: AUTHOR: PROJECT: DATE: REV: WORKING READER DATE CONTEXT: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 68 147 Engrn. BOM Item Serialized Part Instance **Specifies Satisfies** Part No., Serial No. Engrn. BOM Serialized Part Callout NODE: TITLE: NUMBER: ENGINEERING BILL OF MATERIAL SERIALIZED PART CALLOUT MFG/E295 508

Entity Class Definition: Reflects the use of a specific serialized part instance in the construction of an end item.

Key Classes: Part No., Serial No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribut | e Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Contract No. | Sales Contract | 81 | Engineering BOM Item | 68 | specifies |
| End Item Serial No. | End Item | 5 | Engineering BOM Item | 68 | specifies |
| BOM Item No. | Engineering BOM Item | 68 | Engineering BOM Item | 68 | specifies |
| Part No. | Part | 6 | Serialized Part Instance | 147 | satisfies |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | satisfies |
| Part No. | Part | 6 | Engineering BOM Item | 68 | specifies |

| JSED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
|----------|---------------------|----------------------------|---------------------------|----------|---------------|----------|
| | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | RECOMMENDE PUBLICATION | D | | |
| | | Eng. Spec. | Eng. BOM Item | | | |
| | | Contr. No., End It | | | | |
| | | Engrn. BOM Spec. | Callout | | | |
| | | | | | | |
| | | | | | | |
| IODE; M | FG/E296 TITLE: ENG | GINEERING BILL OF MATERIAL | SPECIFICATION C | ALLOUT N | UMBER: 510 | |

Entity Class Definition: Reflects the use of a specific engineering specification in the construction of an end item.

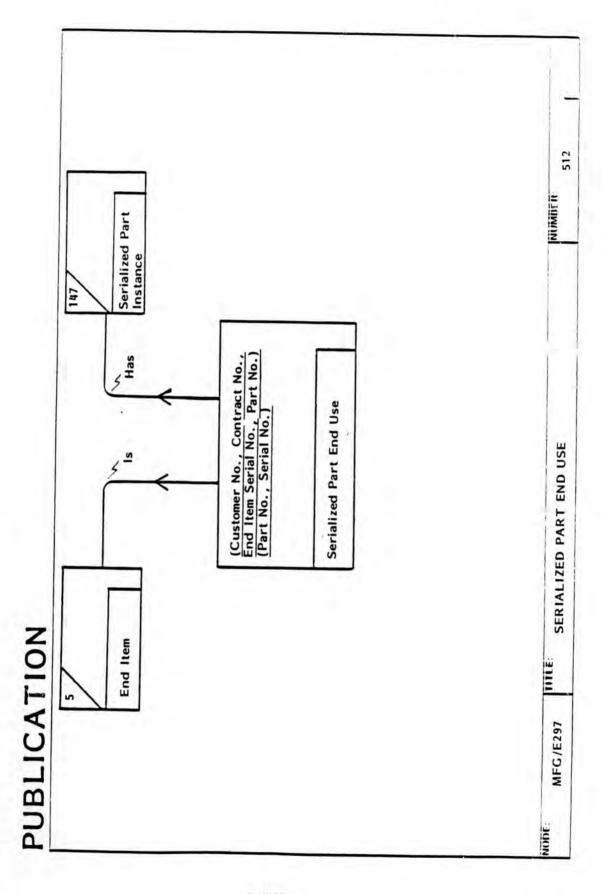
Key Classes: Contract No., End Item Serial No., Bill of Material Item No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribut | e Migratio | n Path |
|---------------------|---------------------------|---------|--------------------------------------|------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | is used as |
| Contract No. | Sales Contract | 81 | Engineering BOM Item | 68 | specifies |
| End Item Serial No. | End Item | 5 | Engineering BOM Item | 68 | specifies |
| BOM Item No. | Engineering BOM Item | 68 | Engineering BOM Item | 68 | specifies |
| Part No. | Part | 6 | Engineering BOM Item | 68 | specifies |
| | | | | | |
| ODE: MFG/E296 (G1) | TITLE: GLOSSARY: ENGI | NEERING | BILL OF MATERIAL N CALLOUT | NUMB | ER: 511 |



Entity Class Definition: Indicates the use of a serialized part instance as an end item.

Key Classes: (Customer No., Contract No., End Item Serial No., Part No.) (Part No., Serial No.)

Owned Attribute Classes:

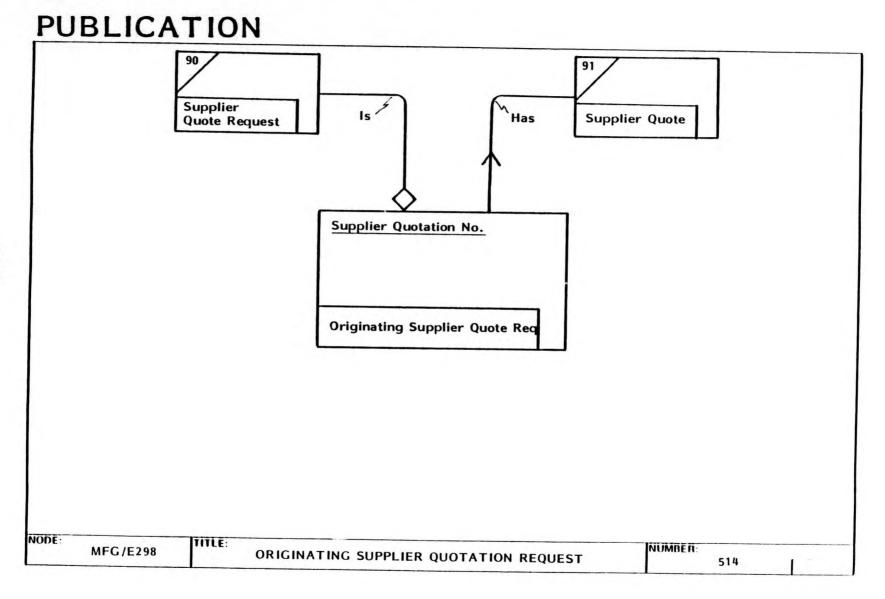
Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Customer No. | Customer | 1 | End Item | 5 | is |
| Contract No. | Sales Contract | 81 | End Item | 5 | is |
| End Item Serial No. | End Item | 5 | End Item | 5 | is |
| Part No. | Part | 6 | Serialized Part Instance | 147 | has |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | has |
| Part No. | Part | 6 | End Item | 5 | is |

FTR110410000U September 1983

513



515

Entity Class Definition: Reflects the original supplier quotation request to which an individual supplier quotation is a response.

Key Classes: Supplier Quotation No.

Owned Attribute Classes:

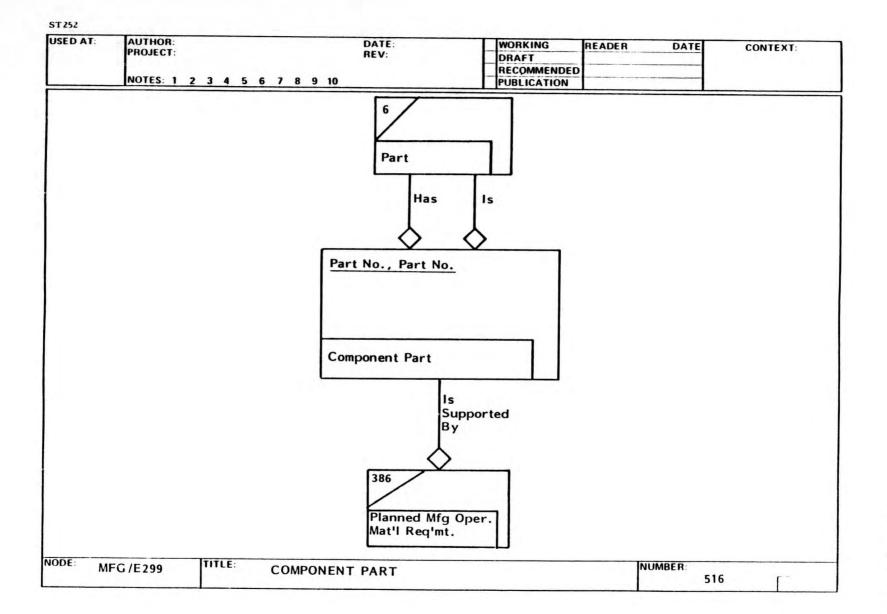
Name:

Definition:

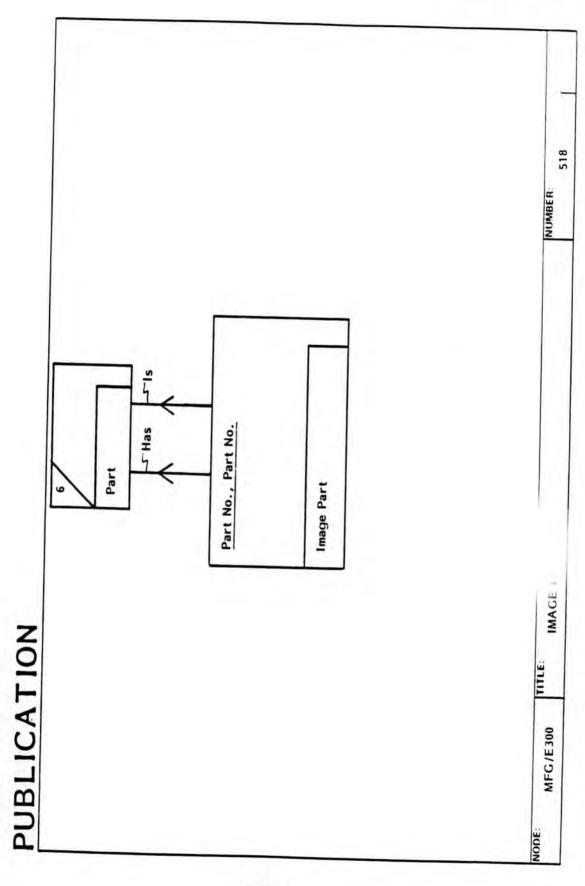
| Inherited | Attribute Class Owned By: | | Attrib | ute Migratio | n Path |
|-------------------------------|----------------------------|---------|--------------------------------------|--------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Supplier Quote Request No. | Supplier Quotation Request | 90 | Supplier Quotation Request | 90 | is |
| Supplier No. | Candidate Supplier | 30 | Supplier Quotation Request | 90 | is |
| Supplier Quotation No. | Supplier Quotation | 91 | Supplier Quotation | 91 | has |
| | | | | | |
| DDE: MFG/E298 (G1) | TITLE: GLOSSARY: ORIG | INATING | SUPPLIER | NUMB | |

QUOTATION REQUEST

 ∞



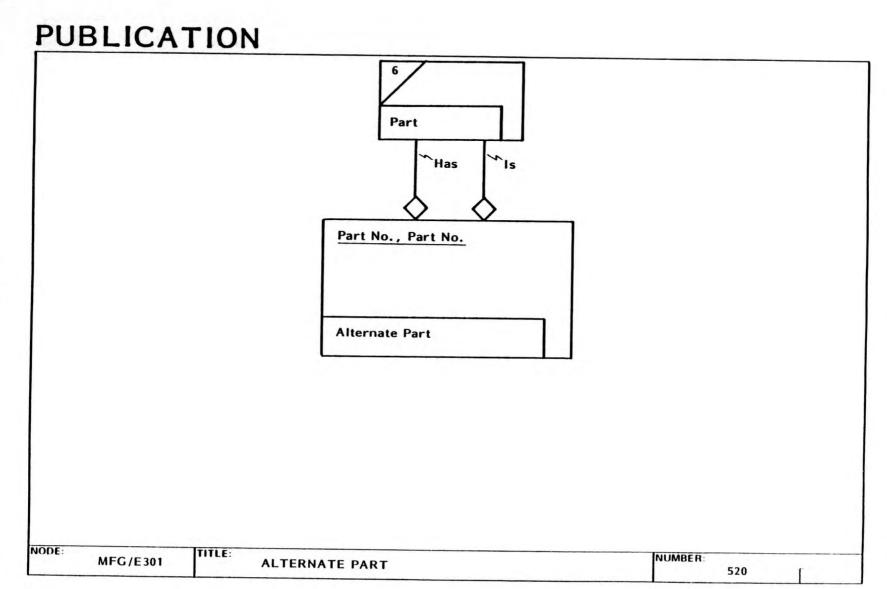
| Name: Definition: | | | | | |
|---|--|-------------|-------------------|---------------|---|
| | | I | Attrib | oute Migratio | |
| | Attribute Class Owned By: Entity Class Name | Number | Entity Class Name | Number | Inherited Through: Relation Class Name |
| hherited ttribute Class(es) art No. | | Number 6 | | Number 6 | Relation Class Name |



FTR110410000U September 1983

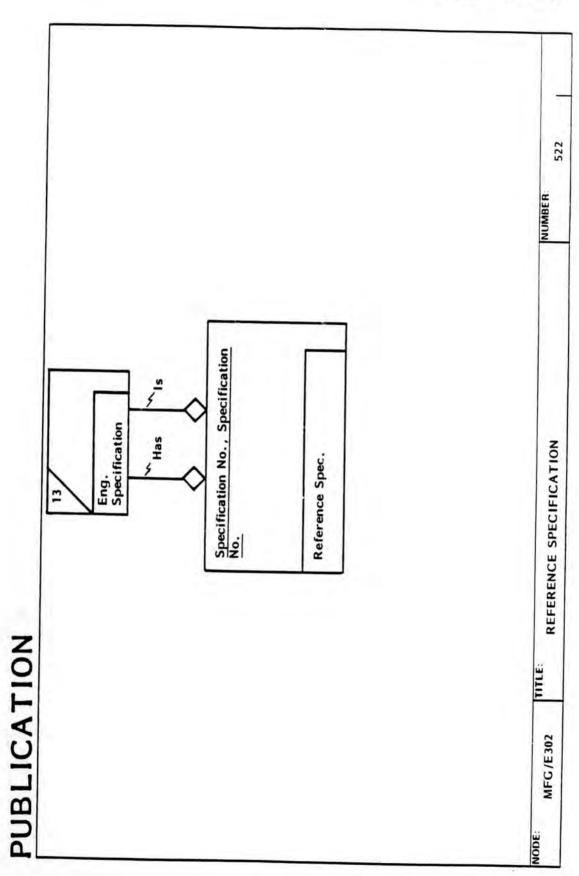
| Name: Definition: | | | | | | |
|---|---------------------------|-------------|--|--------------------------|--|--|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Attribute Class Owned By: | | Attrib | Attribute Migration Path | | |
| nherited | | 1 | | | | |
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| ttribute Class(es) | | Number 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name has | |
| ettribute Class(es) Part No. | Entity Class Name | | Entity Class Name | | | |
| ettribute Class(es) Part No. | Entity Class Name Part | 6 | Entity Class Name Part | 6 | has | |
| ttribute Class(es) | Entity Class Name Part | 6 | Entity Class Name Part | 6 | has | |
| ettribute Class(es) Part No. | Entity Class Name Part | 6 | Entity Class Name Part | 6 | has | |
| Inherited Attribute Class(es) Part No. Part No. | Entity Class Name Part | 6 | Entity Class Name Part | 6 | has | |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Entity Class Name Part | 6 | has | |

Entity Class Definition: A part which is an exact mirror image of another part.



Key Classes: Part No., Part No. **Owned Attribute Classes:** Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Attribute Class(es) Inherited From: **Entity Class Name** Inherited Through: Relation Class Name: Number Number **Entity Class Name** Part No. Part 6 Part 6 has Part No. Part 6 Part 6 is NODE: MFG/E301 (G1) TITLE: NUMBER: GLOSSARY: ALTERNATE PART 521

Entity Class Definition: A part which may be used in place of another part.



FTR110410000U September 1983

| Owned Attribute Classification : | asses: | | | | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------|--|
| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | has |
| Specification No. | Eng. Specification | 13 | Eng. Specification | 13 | is |
| | | | | | |
| | | | | | |
| MFG/E302 (G1) | TITLE: GLOSSARY: REFE | RENCE SP | ECIFICATION | NUMB | ER: 523 |

Entity Class Definition: An engineering specification referenced by another engineering specification.

Key Classes: Specification No., Specification No.

ST 252

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 | DATE: REV: 5 6 7 8 9 10 | WORKING RE DRAFT RECOMMENDED PUBLICATION | ADER DATE | CONTEXT: |
|----------|---------------------------------------|---|--|------------|----------|
| | | Tool Drawing Engrn. Order No. Tool Descr., ProceLine No. Tool Drawing Callo | Oper. Tool Callout Requires , Drawing No., ess Plan No., | 1 | |
| NODE; | FG/E303 | TOOL DRAWING CALLOUT | | NUMBER: 52 | 24 |

525

Entity Class Definition: The tool drawing specified for use with a tool callout.

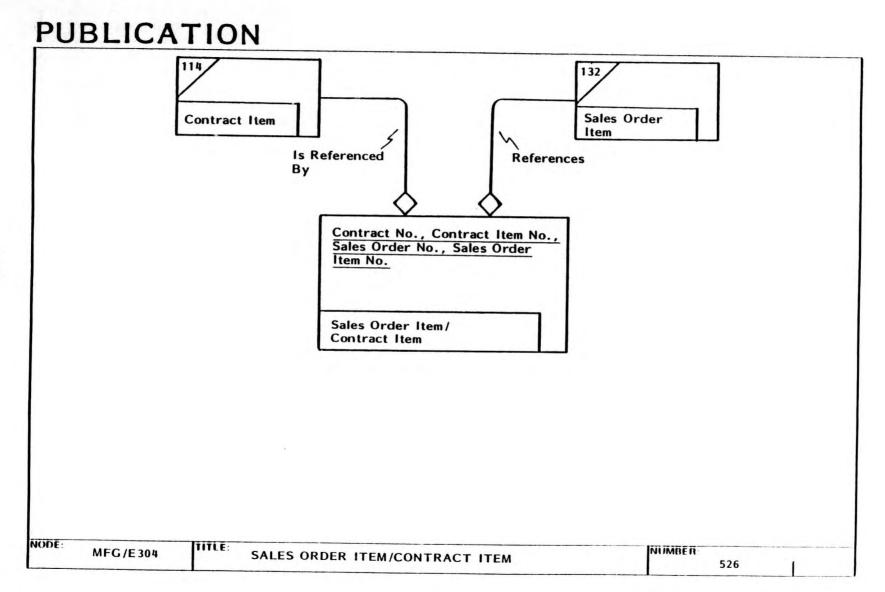
Key Classes: Engineering Order No., Process Plan No., Tool Description, Drawing No., Line No.

Owned Attribute Classes:

Name;

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Drawing No. | Drawing | 414 | Tool Drawing | 42 | satisfies |
| Tool Description | Tool Type | 45 | Tool Drawing | 42 | satisfies |
| Tool Description | Tool Type | 45 | Operation Tool Callout | 47 | requires |
| Engineering Order No. | Engineering Order | 333 | Tool Drawing | 42 | satisfies |
| Process Plan No. | Process Plan | 415 | Operation Tool Callout | 47 | requires |
| Line No. | Planned Mfg. Operation | 421 | Operation Tool Callout | 47 | requires |
| ODE: , (G1) | TITLE: GLOSSARY: TOO | L DRAWIN | NG CALLOUT | NUMB | ER: 525 |



Entity Class Definition: Reflects the referencing of a contract item by a sales order item.

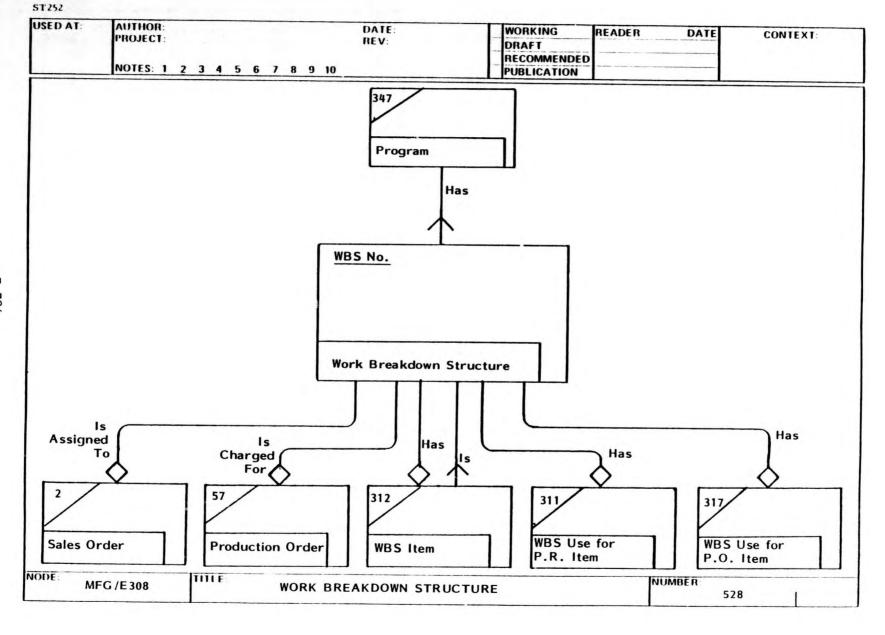
Key Classes: Contract No., Contract Item No., Sales Order No., Sales Order Item No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Contract No. | Sales Contract | 81 | Contract Item | 114 | is referenced by |
| Contract Item No. | Contract Item | 114 | Contract Item | 114 | is referenced by |
| Sales Order No. ID | Sales Order | 2 | Sales Order Item | 132 | references |
| Sales Order Item No. | Sales Order Item | 132 | Sales Order Item | 132 | references |
| ODE: MFG/E304 G1) | | ES ORDER | | NUMB | SER: 527 |



FTR110410000U 8 September 1983

FTR110410000U September 1983

Entity Class Definition: A discrete identifiable unit of work assigned to a person or a group of persons affecting the performance of the contract.

Key Classes: WBS No.

Owned Attribute Classes:

Name: WBS No.

Definition: A number which uniquely identifies a work breakdown structure.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|-------------------------------|--|---------|--------------------------------------|--------|--|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Program Name | Program | 347 | Program | 347 | has |
| | | | | | |
| ODE: MFG/E308 (G1) | TITLE: GLOSSARY: WOR | K BREAK | DOWN STRUCTURE | NUMB | ER: 529 |

FTR110410000U 8 September 1983

Entity Class Definition: A uniquely identifiable quantity of a specific part traceable as a group to a supplier delivery.

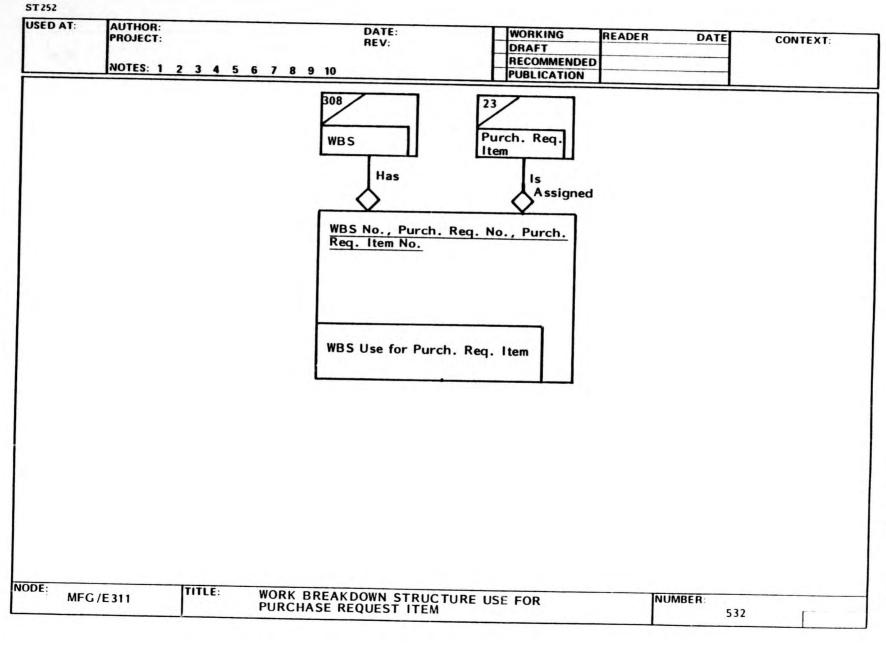
Key Classes: Part No., Supplier Delivery Lot No.

Owned Attribute Classes:

Name: Supplier Delivery Lot No.

Definition: A number which uniquely identifies a supplier delivery lot of a specific part.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | is received as |
| | | | | | |
| 005 | | | () _ () | | |
| ODE: MFG/E309 (G1) | TITLE: GLOSSARY: SUP | PLIER DE | LIVERY LOT | NUMB | ER: |



FTR110410000U September 1983

Entity Class Definition: Reflects the use of one or more work breakdown structures for a purchase request item.

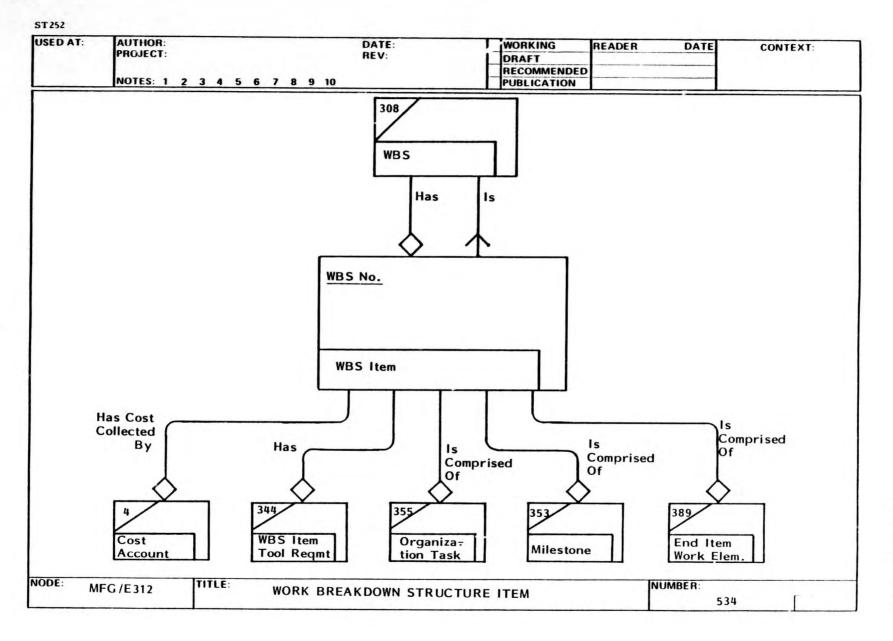
Key Classes: WBS No., Purchase Request No., Purchase Request Item No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|----------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| WBS No. | WBS No. | 308 | WBS No. | 308 | has |
| Purchase Requisition No. | Purchase Request | 22 | Purchase Request Item | 23 | is assigned |
| Purchase Requisition Item No. | Purchase Request Item | 23 | Purchase Request Item | 23 | is assigned |
| | | | | | |
| ODE: MFG/E311 (G1) | TITLE: GLOSSARY: WORI | K BREAKD | OOWN STRUCTURE | NUMB | ÉR: |



| Entity Class Definition: | A discrete identifiable unit of work assigned to a person or group of persons affecting the performance of the contract. |
|--------------------------|--|
| | |

Key Classes: WBS No.

Owned Attribute Classes:

Name:

Definition:

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| WBS No. | WBS No. | 308 | WBS No. | 308 | has |
| WBS No. | WBS No. | 308 | WBS No. | 308 | is |
| | | | | | |
| ODE: MFG/E312 (G1) | TITLE: GLOSSARY: WORK | K BREAKD | OOWN STRUCTURE ITE | NUMB | ÉR: 535 |

ST 252

USED AT: AUTHOR: PROJECT: DATE: WORKING READER DATE CONTEXT: REV: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION Purch. Req Item Has Purch. Req. No., Purch. Req. Item No., Purch. Req. U/M No. Purch. Req. Item Unit of Measure NODE: TITLE: NUMBER: MFG/E313 PURCHASE REQUEST ITEM UNIT OF MEASURE 536

FTR110410000U September 1983 Entity Class Definition: An occurrence of unit of measure on a purchase request item.

Key Classes: Purchase Request No., Purchase Request Item No., Purchase Request U/M No.

Owned Attribute Classes:

Name: Purchase Request U/M No.

Definition: A number which uniquely identifies a unit of measure for a specific purchase request item.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|------------------------------|---------------------------|---------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Request No. | Purchase Request | 22 | Purchase Request Item | 23 | has |
| Purchase Request Item No. | Purchase Request Item | 23 | Purchase Request Item | 23 | has |
| | | | | | |
| ODE: MEG/E313 (G1) | TITLE: CLOSSARY PURC | HACE DE | NIEST ITEM | INUMB | ED: |

GLOSSARY: PURCHASE REQUEST ITEM UNIT OF MEASURE

537

| USED AT: | | | | | | |
|-----------|-------------------|---|-----------------|--------|---------|----------|
| OSED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
| | PROJECT: | REV: | DRAFT | | | |
| | MOTES 4 S S 4 | 5 6 7 6 6 | RECOMMENDED | | | |
| | NOTES: 1 2 3 4 | 5 6 7 8 9 10 | PUBLICATION | L | | |
| | | Purch. Req. Item Purch. Req. No., P No., Purch. Req. D Purch. Req. Item Delivery Req'mt. | urch. Reg. Item | | | |
| NODE: ,,, | EC /E 21/1 TITLE: | | | | IUMBER: | |

Entity Class Definition: An occurrence of a requirement for a specific quantity of a purchase request item to be delivered on a specific date.

Key Classes: Purchase Request No., Purchase Request Item No., Purchase Request Delivery Requirement No.

Owned Attribute Classes:

Name: Purchase Request Delivery Requirement No.

Definition: A number which uniquely identifies a delivery requirement for a specific purchase request item.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Request No. | Purchase Request | 22 | Purchase Request Item | 23 | has |
| Purchase Request Item No. | Purchase Request Item | 23 | Purchase Request Item | 23 | has |
| | | | | | |
| | | A. | | | |
| 1 | | | | | |
| | | | | | |
| ODE: MFG/E314 (G1) | GLOSSARY: PURCE | HASE REQ | UEST ITEM UIREMENT | NUMB | ER: 539 |

| 252 | | | | | | |
|--------|---|-------------------------------|--------------------------------------|--------|------------|----------|
| ED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 6 | DATE: REV: 7 8 9 10 | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT: |
| | | Purch. Ord. Ite | em das | | • | |
| | | Purch. Ord. Item I Req'mt. | Delivery | | | |
| | | | | | | |
| E: MF(| G/E315 | PURCHASE ORDER ITEM D | ELIVERY REQUIREM | FNT N | UMBER: 540 |) |

Entity Class Definition: An occurrence of a requirement for a specific quantity of a purchase order item to be delivered on a specific date.

Key Classes: Purchase Order No., Purchase Order Item No., Purchase Order Delivery Requirement No.

Owned Attribute Classes:

Name: Purchase Order Delivery Requirement No.

Definition: A number which uniquely identifies a delivery requirement for a specific purchase order item.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Order No. | Purchase Order | 26 | Purchase Order Item | 27 | has |
| Purchase Order Item No. | Purchase Order Item | 27 | Purchase Order Item | 27 | has |
| | | | | | |
| ODE: MFG/E315 (G1) | TITLE: GLOSSARY: PUR | CHASE OF | RDER ITEM QUIREMENT | NUMB | DÉR: 541 |

NODE:

MFG/E316

ST 252

AUTHOR: PROJECT:

NOTES: 1 2 3 4 5 6 7 8 9 10

TITLE:

DATE:

REV:

WORKING

PUBLICATION

DRAFT RECOMMENDED

27 Purch. Ord. Item Has Purch. Ord. No., Purch. Ord. Item No., Purch. Ord. U/M No. Purch. Ord. Item Unit of Measure PURCHASE ORDER ITEM UNIT OF MEASURE NUMBER: 542

READER

DATE

CONTEXT:

FTR110410000U September 1983

Entity Class Definition: An occurrence of unit of measure on a purchase order item.

Key Classes: Purchase Order No., Purchase Order Item No., Purchase Order U/M No.

Owned Attribute Classes:

Name: Purchase Order U/M No.

Definition: A number which uniquely identifies a unit of measure for a specific purchase order item

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Purchase Order No. | Purchase Order | 26 | Purchase Order Item | 27 | has |
| Purchase Order Item No. | Purchase Order Item | 27 | Purchase Order Item | 27 | has |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E316 (G1) | TITLE: GLOSSARY: PUR | CHASE OR | DER ITEM | NUMB | ER: 543 |

UNIT OF MEASURE

| SED AT: | AUTHOR: PROJECT: | DATE: | WORKING | READER | DATE | CONTEXT: |
|---------|---------------------|------------------------|------------------|--------|--------|----------|
| | PROJECT. | REV: | DRAFT RECOMMENDE | | | |
| | NOTES: 1 2 3 4 5 6 | 7 8 9 10 | PUBLICATION | :0 | | |
| | | 308 | | | | |
| | | 130% | 27 | | | |
| | | WBS | Purch. Ord. | | | |
| | | 113 | ltem | | | |
| | | Has | ls | 2 | | |
| | | 人 | Assigned | 1 | | |
| | | | | | | |
| | | WBS No., Purch. (| Ord. No., Purch. | | | |
| | | Ord. Item No. | | | | |
| | | | 4 | | | |
| | | | | | | |
| | | _ | 1 | | | |
| | | | | | | |
| | | WBS Use for Purch | Ond Hom | | | |
| | | ose ioi i di cii | . Ord. Item | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| E: 45 | G/E317 | ORK BREAKDOWN STRUCTUR | E USE FOR PURCHA | SE IN | UMBER: | |

545

Entity Class Definition: Reflects the use of one or more work breakdown structures for a purchase order item. Key Classes: WBS No., Purchase Order No., Purchase Order Item No. Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Attribute Class(es) Inherited From: **Entity Class Name** Inherited Through: Relation Class Name: Number **Entity Class Name** Number WBS No. WBS No. 308 WBS No. 308 has Purchase Order No. Purchase Order 26 Purchase Order Item 27 is assigned Purchase Order Purchase Order Item Purchase Order Item 27 Item No. 27 is assigned TITLE: MFG/E317 (G1) WORK BREAKDOWN STRUCTURE USE FOR PURCHASE ORDER ITEM GLOSSARY: NUMBER:

FTR110410000U September 1983

3-403

FTR110410000U 8 September 1983

Entity Class Definition: A set of coordinate data and machine instructions that define the work to be done.

Key Classes: Part No., Numerical Control Program No.

Owned Attribute Classes:

Name: Numerical Control Program No.

Definition: A number which uniquely identifies a numerical control program for a specific part number.

| Inherited Attribute Class(es) | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Part | 6 | has | |
| | | | | | | |
| | | | | | | |
| | | | | 4 | | |
| MFG/E318 (G1) | TITLE: GLOSSARY: NUM | ERICAL C | ONTROL PROGRAM | NUMB | ÉR: 547 | |

ST252

AUTHOR: PROJECT:

RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 131 318 Routing N.C. Item Program Has Is Routing Item No., Part No., N.C. Program No. N.C. Program Callout NODE: TITLE: MFG/E319 NUMBER: NUMERICAL CONTROL PROGRAM CALLOUT 548

WORKING

DRAFT

READER

DATE

CONTEXT:

DATE: REV:

> FTR110410000U September 1983

 ∞

Entity Class Definition: The requirement for a specific numerical control program by a routing item.

Key Classes: Routing Item No., Part No., Numerical Control Program No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------------|---------------------------|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Routing Item No. | Routing Item | 131 | Routing Item | 131 | is |
| Part No. | Part | 6 | Numerical Control Program | 318 | has |
| Numerical Control Program No. | Numerical Control Program | 318 | Numerical Control Program | 318 | has |
| ODE: MFG/E319 (G1) | TTITLE: | | | INUME | |

ST 252

USED AT: AUTHOR: PROJECT: DATE: WORKING READER DATE CONTEXT: REV: DRAFT RECOMMENDED PUBLICATION NOTES: 1 2 3 4 5 6 7 8 9 10 N.C. Program Uses Part No., N.C. Program No., Mach. Instruct. No. Machine Instruction NODE: TITLE: NUMBER: MFG/E320 MACHINE INSTRUCTION 550

Entity Class Definition: The specific set of commands for a particular machine instance.

Key Classes: Part No., Numerical Control Program No., Machine Instruction No.

Owned Attribute Classes:

Name: Machine Instruction No.

Definition: A number which uniquely identifies a machine instruction within a numerical control program.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|----------------------------------|---------------------------|-----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Numerical Control Program | 318 | uses | |
| Numerical Control Program No. | Numerical Control Program | 318 | Numerical Control Program | 318 | uses | |
| | | | | | | |
| ODE: MFG/E320 (G1) | TITLE: GLOSSARY: MACH | IINE INST | RUCTION | NUMB | ÉR: 551 | |

ST 252 USED AT: AUTHOR: PROJECT: DATE: WORKING READER DATE CONTEXT: REV: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 56 Machine N.C. Program Has Has Property No., Part No., N.C. Program No. N.C. Pgm. Mach. Use NODE: TITLE: MFG /E 321 NUMERICAL CONTROL PROGRAM MACHINE USE NUMBER: 552

3-40

FTR110410000U 8 September 1983

NUMBER:

553

Entity Class Definition: Indicates the use of a numerical control program on a specific machine. Key Classes: Property No., Part No., Numerical Control Program No. Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number Owned Equip. Instance Property No. Machine 260 56 has Part No. Part Numerical Control 318 has Program **Numerical Control** Numerical Control Program 318 **Numerical Control** 318 has Program No. Program

NUMERICAL CONTROL

PROGRAM MACHINE USE

TITLE:

GLOSSARY:

MFG/E321 (G1)

| USED AT: | AUTHOR: | DATE: | IMODICANO | | | |
|----------|----------------|---------------------------------------|--------------------------|--------|-----------|----------|
| | PROJECT: | REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
| | NOTES: 1 2 3 4 | 5 6 7 8 9 10 | _ RECOMMENDE PUBLICATION | D | | |
| | | | | | | |
| | | 13 | 399 | | | |
| | | Engrn. | Resource | | | |
| | | Spec. | Need | | | |
| | | Defines | Is | | | |
| | | \diamond | \wedge | | | |
| | | Resource Category | WDS No | | | |
| | | Resource Category Milestone Descr. | , WBS NO., | | | |
| | | | | | | |
| | | 1 | 1 | | | |
| | | | 1 | | | |
| | | | | • | | |
| | | Q.A. Need | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DDE: ME | G/F322 TITLE: | | | 1 | | |
| MI | G/E322 | QUALITY ASSURANCE NEE | D | INU | MBER: 554 | |

Entity Class Definition: The requirement for specific quality assurance procedures and functions which will be used in the manufacture of product end-items.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-----------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Resource Category | Resource Need | 399 | Resource Need | 399 | is | |
| WBS No. | Work Breakdown Structure | 308 | Resource Need | 399 | is | |
| Milestone Description | Milestone | 353 | Resource Need | 399 | is | |
| Specification No. | Engineering Spec. | 13 | Engineering Spec. | 13 | defines | |
| | | | 1 1 1 | | | |
| | | | | | | |
| ODE: MFG/E322 (G1) | TITLE: GLOSSARY: QUAL | ITY ASSU | JRANCE NEED | NUMB | ER: 555 | |

Key Classes: Part No., Serial No.

| ∞ | |
|-----------|-----------|
| September | FTR110410 |
| 1983 | 0000 |

| Name: | | | | | | |
|---------------------|--|--------|--------------------------------------|--------|--|--|
| Definition: | | | | | | |
| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | | |
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Part No. | Part | 6 | Serialized Part Instance | 147 | is traceable to | |
| Serial No. | Serialized Part Instance | 147 | Serialized Part Instance | 147 | is traceable to | |
| Purchase Order No. | Purchase Order | 26 | Assigned Supplier | 186 | is traceable by | |
| | | | | | | |
| | | | | | | |
| | | | 4 | | P . | |

Entity Class Deinition: A uniquely identifiable serialized quantity of a specific part traceable to a specific supplier.

| JSED AT: | AUTHOR: | DATE: | IWODKING | 100.000 | | |
|----------|---------------------|---|----------------|---------|-----------|---------|
| | AUTHOR: PROJECT: | REV: | WORKING DRAFT | READER | DATE | CONTEXT |
| | | | RECOMMENDED | | | |
| | NOTES: 1 2 3 4 5 6 | 7 8 9 10 | PUBLICATION | - | | |
| | | | | | | |
| | | 120 | 181 | | | |
| | | | | | | |
| | | Part Spec. | Part Drawing | | | |
| | | | r art brawing | | | |
| | | Defines | Conforms | | | |
| | | | То | | | |
| | | 1 | \wedge | | | |
| | | | | | | |
| | | Part No., Spec. No. No., Drawing No. | , Engrn. Order | | | |
| | | No., Drawing No. | 1 - 1 - 1 | | | |
| | | | 1.4 | | | |
| | | 1 | 1 | | | |
| | | 1 | 1 | | | |
| | | | 4 | | | |
| | | | | | | |
| | | Part Spec. Req'mt. | | | | |
| | | Tart opec. Red int. | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DE: | TITLE: | | | | | |
| MEC | G/E324 | PART SPECIFICATION REQU | | INU | MBER: 558 | |

| Entity Class Definition: | The requirement for a specific part specification on a part drawing. |
|--------------------------|--|
| Key Classes: Part No., | Specification No., Engineering Order No., Drawing No. |

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------|---------------------------|---------|--------------------------------------|---------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Part Specification | 120 | defines | |
| Specification No. | Engineering Specification | 13 | Part Specification | 120 | defines | |
| Engineering Order No. | Engineering Order | 333 | Part Drawing | 181 | conforms to | |
| Drawing No. | Drawing | 414 | Part Drawing | 181 | conforms to | |
| Part No. | Part | 6 | Part Drawing | 181 | conforms to | |
| | | | | | | |
| ODE: MFG/E324 (G1) | TITLE: GLOSSARY: PART | SPECIFI | CATION REQUIREMENT | - NUMBI | ER: 559 | |

ST 252

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 | DATE: REV: 6 7 8 9 10 | WORKING REAL DRAFT RECOMMENDED PUBLICATION | DER DATE | CONTEXT: |
|----------|---|---|--|-------------|----------|
| | INOTES: 1 2 3 4 5 | Stock/Loc. Use/Part Is Used By Part No., Stock Loc Supplier Delivery Supplier Part Lot S | Supplier Del. Lot Has ocation No., Lot No. | | |
| NODE: | 1FG/E325 | SUPPLIER PART LOT STO | CK LOCATION | NUMBER: 560 | |

FTR110410000U 8 September 1983

561

Entity Class Definition: Storage location for a given supplier delivery lot. Key Classes: Part No., Stock Location No., Supplier Delivery Lot No. Owned Attribute Classes:

Definition:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|------------------------------|---------------------------|--------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Stock Location Use/Part | 227 | is used as | |
| Stock Location No. | Stock Location | 226 | Stock Location Use/Part | 227 | is used as | |
| Supplier Delivery Lot No. | Supplier Delivery Lot | 309 | Supplier Delivery Lot | 309 | has | |
| Part No. | Part | 6 | Supplier Delivery Lot | 309 | has | |
| ODE: MFG/E325 (G1) | TITLE: CLOSSES | | T LOT STOCK LOCATION | INUMB | | |

ST 252

Entity Class Definition: Depicts relation between employee skill and training necessary to acquire that skill.

Key Classes: Training Certification No.

Owned Attribute Classes:

Name: Training Certification No.

Definition: A number which uniquely identifies an instance of a specific employee having received

training in a particular skill.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------------|---------------------------|-----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Skill Classification | Employee Skill | 236 | Employee Skill | 236 | requires | |
| ^{ODE:} MFG/E326 (G1) | TITLE: GLOSSARY: EMP | CLOYEE TI | RAINING | NUMB | ER: 563 | |

 ∞ FTR110410000U September 1983

564

Entity Class Definition: A type of tool that is not serialized. Key Classes: Tool Description Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Attribute Class Owned By: Inherited Inherited From: Attribute Class(es) Inherited Through: Relation Class Name; **Entity Class Name** Number **Entity Class Name** Number **Tool Description** Tool Type Company Tool Type 45 285 is NODE: TITLE: NUMBER: MFG/E327 (G1) GLOSSARY: NON-SERIALIZED TOOL TYPE 565

FTR1104100000 September 1983

| T 252 | | | | | | |
|---------|---------------------------------------|-------------------------------|---------------------------------------|--------|------------|----------|
| SED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 | DATE: REV: 5 6 7 8 9 10 | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: |
| | | Tool Descr. Perishable Non-S | er. ype Is | | • | |
| ODE: M | FG/E328 TITLE: | PERISHABLE NON-SERIA | LIZED TOOL TYPE | N | UMBER: 566 | 6 |

| Key Classes: <u>Tool D</u> Owned Attribute Cla Name: Definition: | | | | | |
|--|--|--------|---|---------------|---|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | oute Migratio | on Path Inherited Through: Relation Class Name; |
| Tool Description | Tool Type | 45 | Entity Class Name Non-Serialized Tool Type | Number 327 | Relation Class Name; |
| ODE: MFG/E328 (G1) | TITLE: GLOSSARY: PERI | SHABLE | NON-SERIALIZED TOOL | TYPE NUMB | ER: 567 |

| ST 252 | | | | | | | | |
|-------------|-------------------------------------|---------------|-------------------|--------------------------------------|--------|---------------|--------|------------|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 | 8 4 5 6 7 8 9 | DATE: REV: | WORKING DRAFT RECOMMENDI PUBLICATION | READER | DATE | CONTEX | KT: |
| | | | Conform. Cert. No | | | | | |
| NODE; MI | FG/E329 | CUSTOMER | FACILITY CONFORM | IANCE CERTIFICAT | ION | UMBER: 568 | Γ | er ery lan |

FTR110410000U September 1983

Entity Class Definition: A conformance certification which is for a customer's facility.

Key Classes: Conform Certification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-----------------------|---------------------------|---------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Conform Certification | Conform Certification | 92 | Conform Certification | 92 | is | |
| Specification No. | Engineering Specification | 13 | Facility Specification | 413 | is used for | |
| Organization ID | Organization | 422 | Facility Specification | 413 | is used for | |
| | | | | | | |
| MFG/E329 (G1) | TITLE: GLOSSARY: CUST | OMER FA | CILITY CONFORMANCE | NUMB | ÉR: | |

 ∞

Entity Class Definition: A conformance certification which is for an owned facility.

Key Classes: Conform Certification No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Conform Certification No. | Conform Certification | 92 | Conform Certification | 92 | is |
| Specification No. | Engineering Specification | 13 | Facility Specification | 413 | is used for |
| Organization ID | Organization | 422 | Facility Specification | 413 | is used for |
| | | | | | |
| ODE: MFG/E330(G1) | TITLE: GLOSSARY: OWN | ED FACIL | ITY E CERTIFICATION | NUMB | ER: 571 |

Entity Class Definition: A detailed description of the tasks required to satisfy the terms and conditions of a specific contract.

Key Classes: Contract No., Change No., Activity Name

Owned Attribute Classes:

Name: Formal Planning Hours

Definition: The estimated number of man-hours of manufacturing engineering planning which will be required to prepare the detailed shop instructions to support a specific task.

Name: Management Program Review Board Directive Number

Definition: A serialized code identifying a management decision relevant to an evaluation of an analysis of an implementation stage in a manufacturing program.

Name: Production Control Board Number

Definition: The sequential numeric value identifying a management decision relating to the control function of the production cycle.

Name: Prepared By

Definition: The name of the person who creates the statement of work in preparation for authorizing/approval signatures.

Name: Page Number

Definition: The numeric code that identifies individual page order within the statement of work.

Name: Allocation Impact

Definition: The assessment of the effect of the allocation of resources on the company's (or division's) overall manufacturing operations.

Name: Change Description

Definition: The descriptive text which explains the conditions of the revision.

NODE:

MFG/E331 (G1)

TITLE:

GLOSSARY: STATEMENT OF WORK

NUMBER:

573

September 198

 ∞

Owned Attribute Classes: (Continued) Name: Change No. Definition: The unique code which identifies a specific engineering-supported revision. Name: Assembly Class Name Definition: The identifying nomenclature grouping specific manufacturing operation data for cost collection and evaluation. Name: Configuration Review Board Document Number Definition: A serialized code identifying a board-level manufacturing decision. Name: Response Number Definition: A numeric code that uniquely identifies each instance of a statement of work Name: Fabrication Hours Definition: A numeric value indicating the predicted man-hours which will be required to produce a specified detail part configuration in known quantity lots. Name: Quantity of Formal Planning Definition: The estimated volume of manufacturing engineering planning workload which will be required to prepare the detailed shop instructions to support a specified task. Name: Planning Type Definition: A code identifying the category of formal planning required to support the statement of work task (e.g., fabrication planning, assembly planning, etc.) Name: Production Type Definition: A code identifying the category of production required to build the product (e.g., production, advanced production, etc.) Name: Estimator Definition: Signature of the person who provides the manpower and cost/pricing data to the statement of work. Name: Instruction Definition: The textual description of the task for which the statement of work is generated. Name: Issue Number Definition: The code identifying each iteration of a document.

| NODE: MFG/E331 (G2) | TITLE: | GLOSSARY: | STATEMENT OF WORK | NUMBÉR: | |
|------------------------|--------|-----------|-------------------|---------|--|
|------------------------|--------|-----------|-------------------|---------|--|

Owned Attribute Classes: (Continued)
Name: Activity Information
Definition: A textural description of the activity to be planned.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|------------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | results in |
| DE: MFG/E331 (G3) | TITLE: GLOSSARY: STAT | TEMENT O | F WORK | NUMBI | ĒR: |

FTR110410000U September 1983

576

ST 252

Entity Class Definition: Establishes the guidelines for product being built and scopes major packages of redesign and assures that it corresponds to the product as ordered and as designed.

Key Classes: Engineering Change Proposal No.

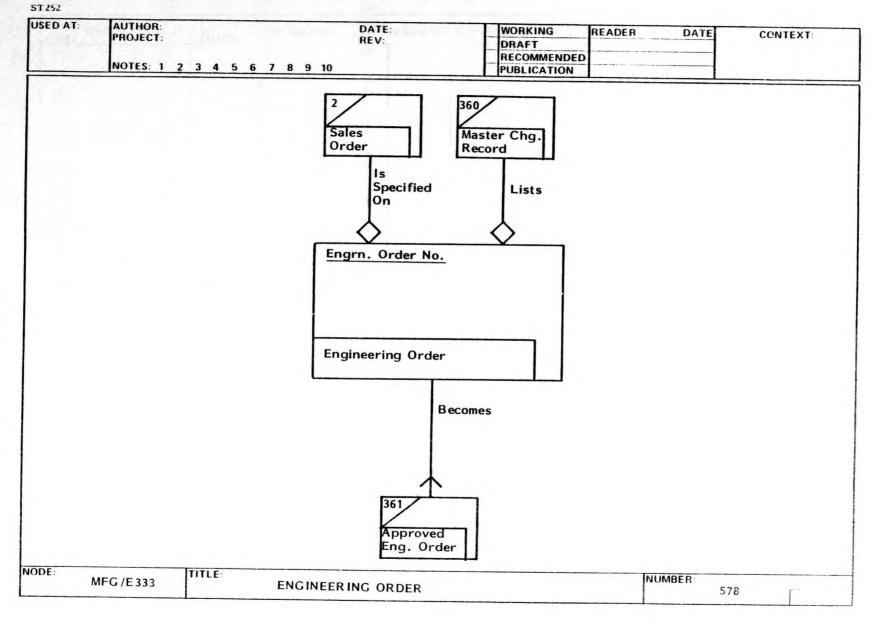
Owned Attribute Classes:

Name: Engineering Change Proposal No.

Definition: A unique identifier of a modification to an existing design approved by engineering for

planning.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | is referenced by |
| ODE: MFG/E332 (G1) | TITLE: GLOSSARY: ENG | GINEERING | CHANGE PROPOSAL | NUMB | SÉR: 577 |



Entity Class Definition: Authorization from engineering for new and modified product design, testing, process

specification, etc.; authorization to effect an engineering initiated change; authorization

to release an engineering drawing or document.

Entity Class Synonyms: E.O., Engineering Release, Engineering Change Notice

Key Classes: Engineering Order No.

Owned Attribute Classes:

Name: Engineering Order No.

Definition: A unique number assigned to each engineering order for identification.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Sales Order | Sales Order | 2 | Sales Order | 2 | is specified on |
| Master Change Record No. | Master Change Record | 360 | Master Change Record | 360 | lists |
| | | | | | |
| | | | | | |
| IODE: MEG /E 333 (C.1 | TITLE: CLOSSED FNC | INCEDING | | INLIME | |

GLOSSARY: ENGINEERING ORDER

579

ST 252

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING READ | ER DATE | CONTEXT: |
|----------|---------------------|--|---|-------------|----------|
| | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | RECOMMENDED PUBLICATION | | |
| | | Planned Mfg. Oper. Is Used For Process Plan No., L Order No. | Prod. Order Authorizes Work On Line No., Prod. | | |
| NODE: | TITLE: | | | Till takes | |
| 1.4 | IFG/E334 | AUTHORIZED OPERATION | | NUMBER: 580 | |

FTR110410000U 8 September 1983

Entity Class Definition: An individual operation on a production order which is required to accomplish the fabrication of a part.

Key Classes: Process Plan No., Line No., Production Order No.

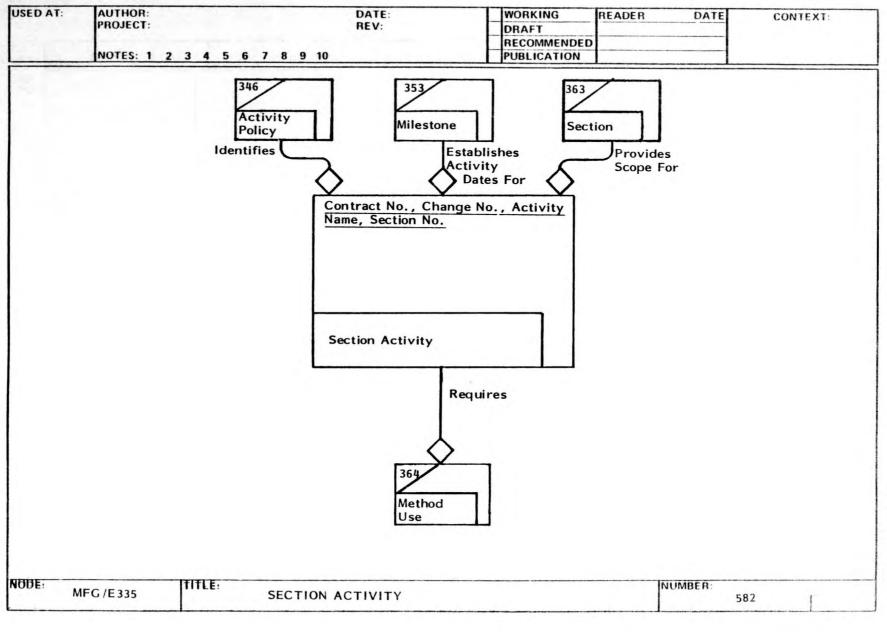
Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Process Plan No. | Process Plan | 415 | Planned Mfg. Operation | 421 | is used for |
| Line No. | Planned Mfg. Operation | 421 | Planned Mfg. Operation | 421 | is used for |
| Production Order No. | Production Order | 57 | Production Order | 57 | authorizes work on |
| | | | | | |
| MFG/E334 (G1) | TITLE: GLOSSARY: AUT | THORIZED | OPERATION | NUMB | SER: 581 |

ST 252



FTR110410000U 8 September 1983 Entity Class Definition: Scheduled function or group of related functions to be performed in the manufacture of an aerospace product (e.g., tooling, planning, construction, fabricate, symbol, installed, move and store, manage, perform task). These activities are categorized for planning purposes in order to develop the sequential flow of major manufacturing functions.

Key Classes: Contract No., Change No., Activity Name, Section No.

Owned Attribute Classes:

Name: Scheduled Activity Completion Date

Definition: A numeric code that indicates the manufacturing day on which a section activity is scheduled to complete.

Name: Scheduled Activity Start Date

Definition: A numeric code that indicates the manufacturing day upon which a section activity is scheduled to begin.

Name: Flow Span of Assembly

Definition: The elapsed time duration from start date to completion date required to complete all production activity on an assembly.

Name: Line Position

Definition: The numeric value assigned to indicate the location and sequential order of production line assembly stations.

Name: Major Assembly Break

Definition: The interface between two significant portions of the end item product in the production line orientation.

NODE: MFG/E335 (G1)

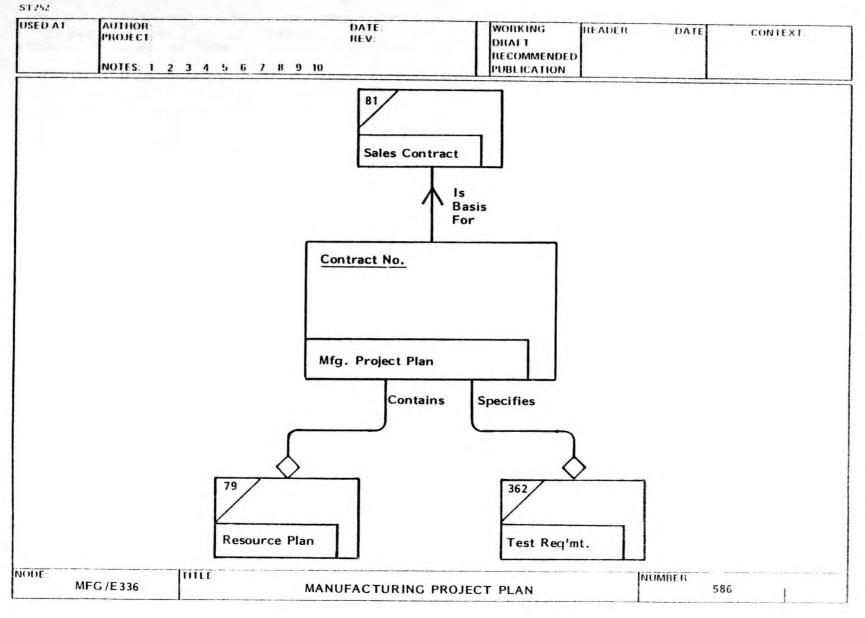
TITLE:

GLOSSARY: SECTION ACTIVITY

NUMBER:

583/584

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Contract No. | Sales Contract | 81 | Activity Policy | 346 | identifies | |
| Change No. | Statement of Work | 331 | Activity Policy | 346 | identifies | |
| Activity Name | Activity Policy | 346 | Activity Policy | 346 | identifies | |
| Section No. | Section | 363 | Section | 363 | provides scope for | |
| WBS No. | Work Breakdown Structure | 308 | Milestone | 353 | establishes activity dates for | |
| Milestone Description | Milestone | 353 | Milestone | 353 | establishes activity dates for | |
| | | | | | | |
| DE: MFG/E335 (G2) | TITLE: GLOSSARY: SEC | TION ACT | IVITY | NUMBE | ER: 585 | |



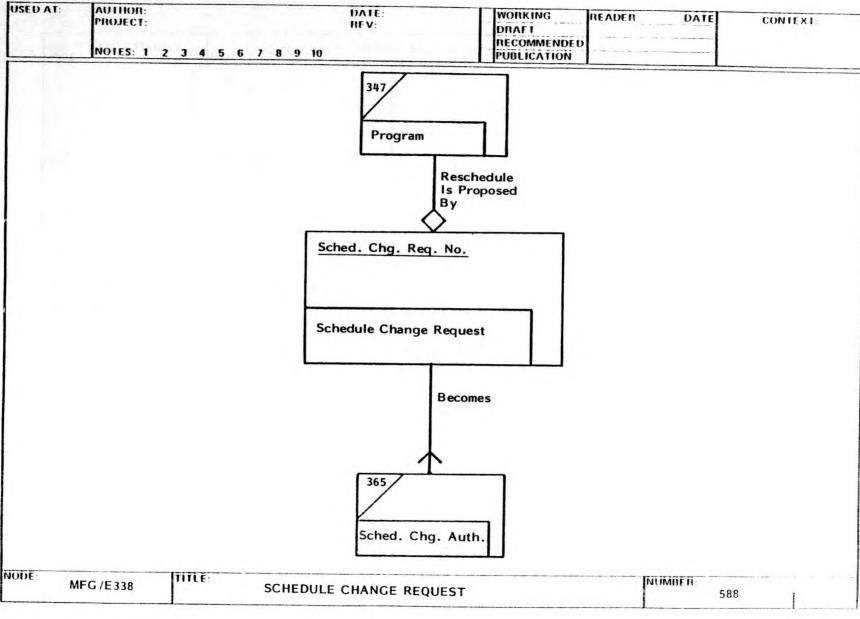
FTR110410000U September 1983

| œ | |
|-----------|------------------|
| September | L LYTTO4TOOC |
| 1983 | |
| | 8 September 1983 |

| Key Classes: <u>Contra</u> Owned Attribute Class Name: Definition: | | | | | |
|---|--|---------|---------------------------------|----------------|--|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | bute Migration | n Path Inherited Through: Relation Class Name; |
| Contract No. | Sales Contract | 81 | Entity Class Name Sale Contract | 81 | is basis for |
| | | | | | |
| | | | | | |
| DDE: MFG ⁻ /E336(G1) | TITLE: GLOSSARY: MAN | UFACTUR | RING PROJECT PLAN | NUMB | ÉR: 587 |

Entity Class Definition: A manufacturing plan of action for the acquisition of materials and the allocation of resources and support functions to produce a deliverable end-item product in conformance with the terms and conditions of the contract.

ST252



FTR110410000U September 1983

00

589

Entity Class Definition: A proposed modification to the master schedule.

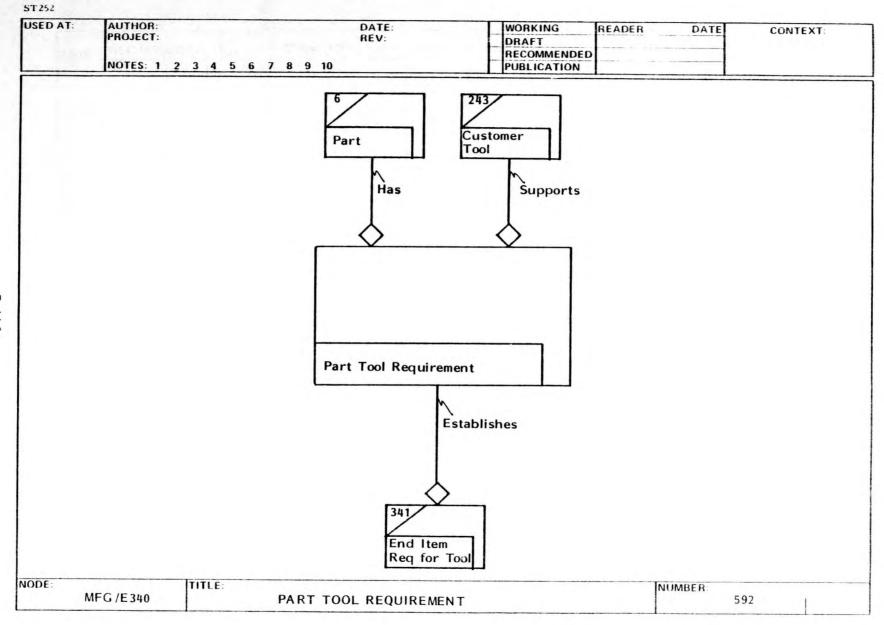
Key Classes: Schedule Change Request No.

Owned Attribute Classes:

Name: Schedule Change Request No.

Definition: A control number assigned to each request for a schedule change.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Program Name | Program | 347 | Program | 347 | reschedule is proposed by |
| ODE: MFG/E338 (G1) | TITLE: GLOSSARY: SCH | EDULE CH | IANGE REQUEST | NUMB | ÉR: 589 |



| Se | - |
|----|---|
| ö | |
| 7 | - |
| Ò | í |
| | i |
| 킁 | Ċ |
| O | 5 |
| H | ۲ |
| | 0 |
| - | C |
| 9 | C |
| 00 | |
| W | Č |

00

| Key Classes: Part N | lo., Tool Property No. | | | | |
|--|--|-------------|--|----------------|---|
| Owned Attribute Clas | | | | | |
| | 3363. | | | | |
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | A A A A A A A A A A A A A A A A A A A | bute Migratio | n Daah |
| المواجعة المواجعة | | | Attri | bute migration | n ratn |
| | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | Number | |
| Attribute Class(es) | | Number 6 | | T | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |
| Inherited Attribute Class(es) Part No. Tool Property No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) Part No. | Entity Class Name Part | 6 | Inherited From: Entity Class Name Part | Number 6 | Inherited Through: Relation Class Name: has |

[[医统统公司]][[台及传统]][[[陈统公公司]][[[陈统公公司]]][[[陈统公公司]][[[陈统公公司]]

3-448

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
|----------|---------------------|----------------------|--|--------|--------|----------|
| | NOTES: 1 2 3 4 5 6 | 7 8 9 10 | RECOMMENDI PUBLICATION | ED | | |
| | | End Item | Part Tool Req'mt. Establish tem Serial No., perty No., Part No | | | |
| IODE; | MFG /E341 | END ITEM REQUIREMENT | EOR TOOL | N | UMBER: | <u> </u> |

FTR110410000U September 1983

 ∞

Entity Class Definition: The applicability of a given tool to a specified end item. The serial numbers of all end items that require a given tool is collectively the effectivity of the tool.

Key Classes: Contract No., End Item Serial No., Part No., Tool Property No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---|--|--|---|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Sales Contract | 81 | End Item | 5 | has |
| End Item | 5 | End item | 5 | has |
| Part | 6 | Part Tool Requirement | 340 | establishes |
| Customer Owned Tool | 243 | Part Tool Requirement | 340 | establishes |
| Part | 6 | End Item | 5 | has |
| TITLE: | | | IN INCOME | ED. |
| | Sales Contract End Item Part Customer Owned Tool Part | Entity Class Name Sales Contract End Item 5 Part Customer Owned Tool Part 6 | Entity Class Name Sales Contract End Item Part Customer Owned Tool Part Fig. 1. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name Fig. 2. Septimized From: Entity Class Name End Item Fig. 2. Septimized From: Entity Class Name Fig. 2. Septimized From: End Item Fig | Entity Class Name Sales Contract End Item Sales Contract End Item |

ST 252

FTR110410000U September 1983

 ∞

597

Entity Class Definition: The need by a department for a particular equipment type.

Key Classes: Equipment Description, Organization ID

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|--------------------------|--|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Equipment Description | Equipment | 51 | Equipment | 51 | satisfies |
| Organization ID | Organization | 422 | Organization | 422 | has |
| | | | | | |
| | | | | | |
| ODE: MFG/E342 (G1) | TITLE: CLOSCADY ORCA | NIZA TION | EQUIPMENT REQUIRE | INUMB | ÉR. |

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 | 3 4 5 6 7 8 9 10 | DATE: REV: | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: |
|----------|-----------------------------------|------------------|--------------------------------|---------------------------------------|--------|------------|----------|
| | | 31 WI | BS Item Has BS No., Tool Pro | Customer Tool Supports perty No. | | | |
| | | | /BS Item Tool Rec | ı'mt. | | | |
| DDE: | FG/E344 | TITLE: WBS ITE | M TOOL REQUIRE | MENT | N | UMBER: 600 | f- |

| Key Classes: WBS N | No., Tool Property No. | | - 4 | | |
|----------------------------------|--|--------|--|----------------|---|
| Owned Attribute Cla | sses: | | | | |
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Inherited | Assuibute Class Owned Buy | | Attrit | bute Migration | n Path |
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | bute Migration | |
| Attribute Class(es) | | Number | Inherited From: | | Inherited Through: Relation Class Name: |
| | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Attribute Class(es) WBS No. | Entity Class Name Work Breakdown Structure | 308 | Inherited From: Entity Class Name WBS Item | Number 312 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) WBS No. | Entity Class Name Work Breakdown Structure | 308 | Inherited From: Entity Class Name WBS Item | Number 312 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) WBS No. | Entity Class Name Work Breakdown Structure | 308 | Inherited From: Entity Class Name WBS Item | Number 312 | Inherited Through: Relation Class Name: has |
| Attribute Class(es) WBS No. | Entity Class Name Work Breakdown Structure | 308 | Inherited From: Entity Class Name WBS Item | Number 312 | Inherited Through: Relation Class Name |
| Attribute Class(es) WBS No. | Entity Class Name Work Breakdown Structure | 308 | Inherited From: Entity Class Name WBS Item | Number 312 | Inherited Through: Relation Class Name |

ST252

AUTHOR: PROJECT: WORKING DATE USED AT: DATE: READER CONTEXT: REV: DRAFT RECOMMENDED PUBLICATION NOTES: 1 2 3 4 5 6 7 8 9 10 Rel. Engrn. Sales Drawing Contract Has Has Engrn. Order No., Drawing No., Contract No. Dwg. Applic. to Contract NUMBER: NODE: TITLE: 602 MFG/E345 DRAWING APPLICABILITY TO SALES CONTRACT

FTR110410000U September 1983

3-455

Key Classes: Engineering Order No., Drawing No., Contract No.

Owned Attribute Classes:

Name:

Definition:

Entity Class Definition: The applicability of a specific drawing to a specific contract.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|--------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Engineering Order No. | Engineering Order | 333 | Released Engineering Drawing | 12 | has |
| Drawing No. | Drawing | 414 | Released Engineering Drawing | 12 | has |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | has |
| | | | | | |
| No. | | | | | |

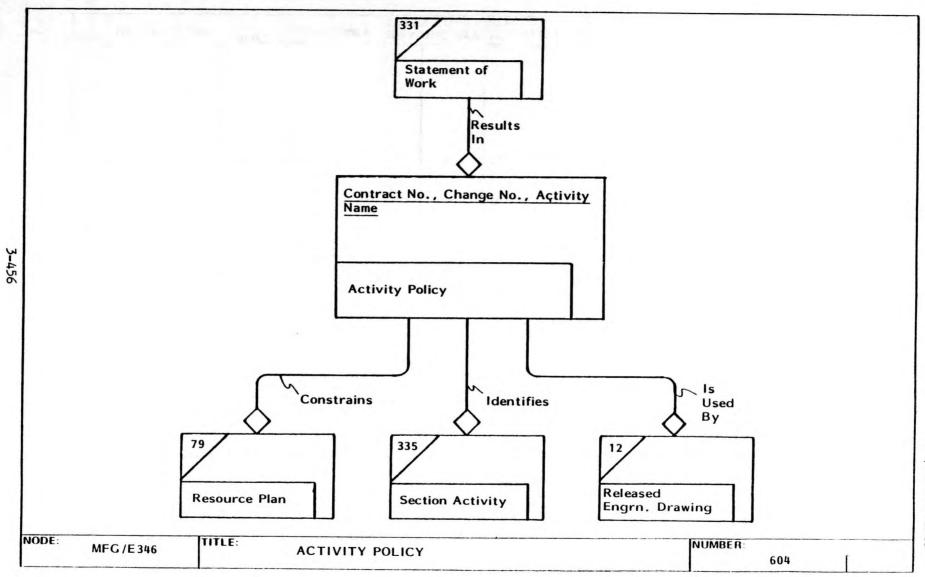
NODE: MFG/E345 (G1)

TITLE: GLOSSARY: DRAWING APPLICABILITY TO SALES CONTRACT

NUMBER:

September 1983

603



FTR110410000U September 1983

Entity Class Definition: An organizational directive establishing the policy guidelines to be followed in implementing a statement of work.

Key Classes: Contract No., Change No., Activity Name

Owned Attribute Classes:

Name: Item Description

Definition: A brief statement expanding on the SOW and establishing the parameters and approach for

planning ensuing activities and overall contraints of the basic assumption memorandum.

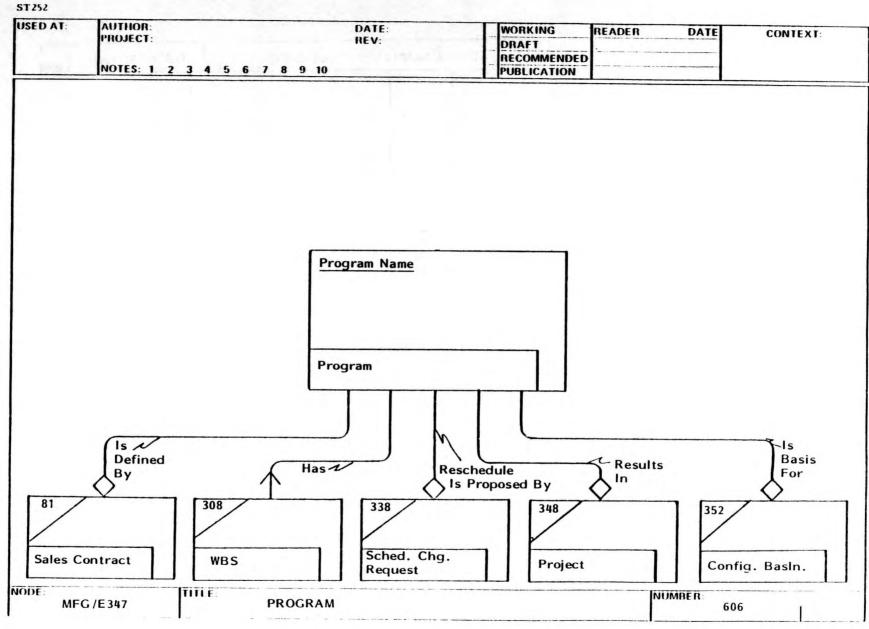
Name: Annual Commitment Forecast

Definition: The identification of project targets and goals.

Name: Activity Name

Definition: The name of a function or group of related functions.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Contract No. | Sales Contract | 81 | Statement of Work | 331 | results in |
| Change No. | Statement of Work | 331 | Statement of Work | 331 | results in |
| | | | | | |
| | | | | | |
| ODE: MFG/E346(G1) | TITLE: GLOSSARY: ACT | TIVITY PO | DLICY | NUMB | ER: 605 |



FTR110410000U September 1983

 ∞

5-455

FTR110410000U 8 September 1983

Entity Class Definition: The highest level of product identification; the total aircraft effort. (e.g., B-1 program) Key Classes: Program Name Owned Attribute Classes: Name: Program Name Definition: The name of a program (e.g., B-1) **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Attribute Class(es) **Entity Class Name** Inherited Through: Relation Class Name; Number **Entity Class Name** Number NODE: TITLE: GLOSSARY: PROGRAM NUMBER: MFG/E347 (G1) 607

| SED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 6 | DATE: REV: 7 8 9 10 | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT: |
|---------|---|---|--|--------|--------|----------|
| | | Sales Contract Is Composed Of Program Name, Con | Program Results In tract Project No. | | | |
| | | Project | | | | |
| | | | | | | |
| DDE; M | FG/E348 TITLE: | PROJECT | | Įn | UMBER: | |

Entity Class Definition: A designated portion of a larger program.

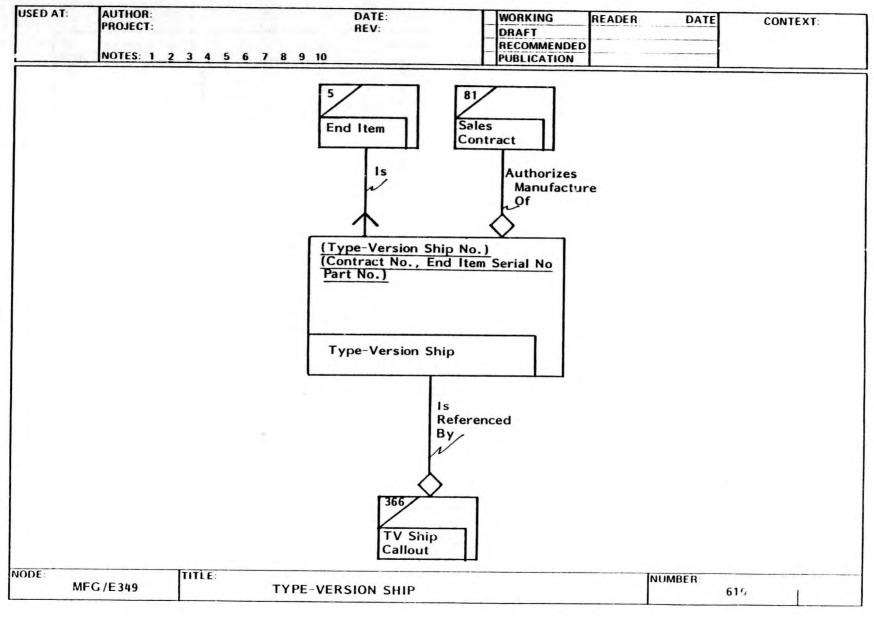
Key Classes: Program Name, Contract Project No.

Owned Attribute Classes:

Name: Contract Project No.

Definition: A number assigned to a task to uniquely identify it within a contract.

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Program Name | Program | 347 | Program | 347 | results in |
| Contract No. | Sales Contract | 81 | Sales Contract | 81 | is composed of |
| | | | | | |
| | | | | | |
| | | | | 4 | |
| | | | | 1 | |
| | | | | | |
| ODE: MFG/E348(G1) | TITLE: GLOSSARY: PR | OJECT | | NUMB | ER: 609 |



FTR110410000U September 1983

Entity Class Definition: Refers to a specific aircraft identified by a serial number and a type version number.

Key Classes: (Type-Version Ship No.) (Contract No., End Item Serial No., Part No.)

Owned Attribute Classes:

Name: (Type-Version Ship No.)

Definition: A unique identifier of an aircraft

| Inherited | Attribute Class Owned By: | | Attri | n Path | |
|-----------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| (Contract No.) | Sales Contract | 81 | Sales Contract | 81 | authorizes manufacture of |
| (End Item Serial No.) | End Item | 5 | End Item | 5 | is |
| Contract No. | Sales Contract | 81 | End Item | 5 | is |
| Part No. | Part | 6 | End Item | 5 | is |
| | | | | | |
| NFG /E349 (G1) | TITLE: GLOSSARY: TYPI | E-VERSIO | N SHIP | NUMB | ER: 611 |

FTR110410000U September 1983

| ST 252 | | | | | | |
|----------|---------------------------------------|--------------------------------|--------------------------------------|--------|--------|----------|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 | DATE: REV: 5 6 7 8 9 10 | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT: |
| | | Routing Item Routing Item No. | Station | | | |
| | | Station Callout | | | | |
| | | | | | | |
| IODE; | FG/E350 | STATION CALLOUT | | NI | JMBER: | 12 |

3-46

FTR110410000U 8 September 1983

| Entity Class Definiti | on: Identified station where t | the activit | y specified by a routin | g item will ta | ke place. |
|--|--|-------------|---|-------------------------|--|
| Key Classes: Routin | ng Item No. | | | | |
| Owned Attribute Cla | sses: | | | | |
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Inherited | | | | | |
| Attribute Class(es) | Attribute Class Owned By: | | Attril | oute Migratio | n Path |
| | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | oute Migratio Number | n Path Inherited Through: Relation Class Name: |
| Routing Item No. | | Number | Inherited From: | | Inherited Through: |
| | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Routing Item No. Organization ID Station No. | Entity Class Name Routing Item | 131 | Inherited From: Entity Class Name Routing Item | Number 131 | Inherited Through: Relation Class Name; has |
| Organization ID | Entity Class Name Routing Item Organization | 131 422 | Inherited From: Entity Class Name Routing Item Station | Number 131 100 | Inherited Through: Relation Class Name: has |

NODE: MFG/E350 (G1)

TITLE:

GLOSSARY:

STATION CALLOUT

NUMBER:

613

Part

INDEX

DATE:

REV:

WORKING

RECOMMENDED

PUBLICATION

DRAFT

READER

DATE

NUMBER:

614

CONTEXT:

ST 252

NODE:

MFG/E351

AUTHOR: PROJECT:

NOTES: 1 2 3 4 5 6 7 8 9 10

TITLE:

Entity Class Definition: A numeric code used as a schedule planning tool to assure proper sequencing of parts to support assembly.

Key Classes: Index No.

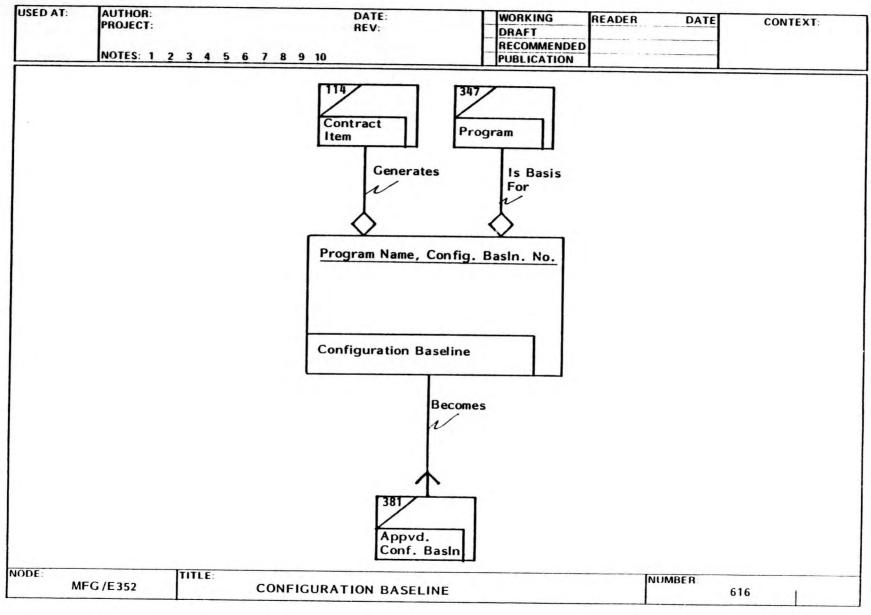
Owned Attribute Classes:

Name: Index No.

Definition: A number to code the order code, complexity, cycle, account, order type, assembly time, and section ID information.

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Organization ID | Organization | 422 | Station | 100 | has assigned to it |
| Station No. | Station | 100 | Station | 100 | has assigned to it |
| | | 1 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| MFG/E351 (G1) | TITLE: GLOSSARY: INI | DEX | | NUMB | ER: 615 |

ST 252



FTR110410000U 8 September 1983

Entity Class Definition: A general high level set of engineering product specifications by which design engineering

defines a deliverable end item.

Entity Class Synonyms: Product Design, Preliminary Design

Key Classes: Program Name, Configuration Baseline No.

Owned Attribute (asses:

Name: Configuration Baseline Number

Definition: A number which identifies a unique configuration of aircraft.

Name: Scheduled Release Date

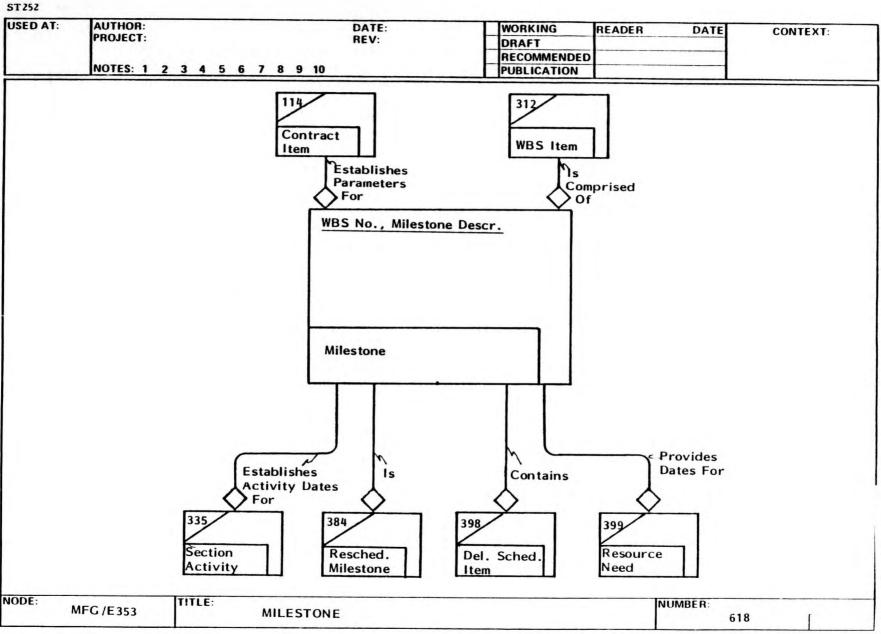
Definition: The date parameters showing when the design engineering data is to be released to manufacturing.

Name: Type of Change

Definition: A code designating the nature of the design/drawing revision (e.g., "new", "revised", "deleted",

etc.).

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Program Name | Program | 347 | Program | 347 | is basis for |
| Contract No. | Sales Contract | 81 | Contract Item | 114 | generates |
| Contract Item No. | Contract Item | 114 | Contract Item | 114 | generates |
| | | | | | |
| | | | | | |
| | | 1 | | | |
| IOD. | Taxa- | | | | |
| MFG /E352 (G 1 |) TITLE: GLOSSARY: CON | FIGURATI | ON BASELINE | NUME | 617 G |



Entity Class Definition: A significant selected scheduled event or task in the performance of a contract.

Entity Class Synonyms: Preliminary Master Schedule Item

Key Classes: WBS No., Milestone Description

Owned Attribute Classes:

Name: Milestone Description

Definition: A phrase that describes the work to be accomplished at the completion of the milestone.

Name: Milestone In-Work Date

Definition: The schedule date on which functional activity on a given milestone is planned to commence.

Name: Milestone Completion Date

Definition: The scheduled date on which functional activity on a given milestone is planned to be completed.

Name: Scheduled Delivery Date

Definition: The calendar date upon which the completed end-item is scheduled to be delivered to the customer.

Name: Manufacturing Day

Definition: A numeric code identifying the sequential order of the regularly scheduled weekly work days.

Name: Need Date

Definition: A calendar date specifying when an acquired item must be available for use.

Name: Position Value

Definition: An alphanumeric code that identifies location on each data line of a Preliminary Master

Schedule Item.

Name: Quantity of Positions

Definition: The number of production positions to which a particular line item, of the published schedule

parameters, applies.

Name: Rate Per Week

Definition: The number of airplanes that are produced each week by the manufacturing facility.

NODE: TITLE: GLOSS MFG/E353 (G1)

STONE

NUMBER: 619/620

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| WBS No. | Work Breakdown Structure | 308 | WBS Item | 312 | is comprised of |
| Contract No. | Sales Contract | 81 | Contract Item | 114 | establishes parameters for |
| Contract Item No. | Contract Item | 114 | Contract Item | 114 | establishes parameters for |
| | | | | | |
| | | | 1 | | |
| | | | | Ŋ, | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| DE: MFG/E353 (G2) |) TITLE: GLOSSARY: MILI | ESTONE | | NUMB | ER: 621 |

Entity Class Definition: Request from various departments to engineering for changes to an item, part or assembly.

Key Classes: Engineering Change Request No.

Owned Attribute Classes:

Name: Engineering Change Request Number

Definition: A unique identifier which identifies each individual instance of an engineering change request.

Name: Engineering Change Request Date Definition: The date the request was originated.

Name: Engineering Change Request Description

Definition: A definitive explanation of the requested change to the engineering drawing.

Name: Engineering Change Request Originator

Definition: The name of the person initiating the engineering change request.

Name: Engineering Change Request Approval

Definition: The authorizing approval signature which provides corroborating agreement of the necessity

for a change to the drawing.

| Inherited | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | | |
|--------------------------|--|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Engineering Order No. | Engineering Order | 333 | Released Engineering Drawing | 12 | is referenced by | |
| Drawing No. | Drawing | 414 | Released Engineering Drawing | 12 | is referenced by | |
| Organizaiton ID | Organization | 422 | Organization | 422 | issues | |
| NODE: MFG/E354 (G1) | TITLE: GLOSSARY: ENG | INEERING | CHANGE REQUEST | NUMBÉ | R: 623 | |

 ∞ FTR110410000U September 1983

NUMBER:

624

TITLE:

ORGANIZATION TASK

3-47

| Name: Definition: | | | | | |
|--------------------------------|--|------------|--|----------------|---|
| nherited ttribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attril Inherited From: Entity Class Name | bute Migration | n Path Inherited Through: Relation Class Name |
| VBS No. Organization ID | Work Breakdown Structure Organization | 308 422 | WBS Item Organization | 312 422 | is comprised of is responsible for |

ST252 AUTHOR: PROJECT: USED AT: DATE: WORKING READER DATE CONTEXT: REV: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 332 361 Engrn. Chg. Apprv. Engr. Order Proposal Results Has In Engrn. Chg. Proposal No., Engrn. Order No. Engrn. Ord. Use for Engrn. Change Proposal

ENGINEERING ORDER USE FOR

ENGINEERING CHANGE PROPOSAL

NODE:

MFG/E358

TITLE:

FTR1104100000 8 September 1983

NUMBER:

626

3-47

FTR110410000 8 September 198

Entity Class Definition: The use of an engineering order for an engineering change proposal.

Key Classes: Engineering Change Proposal No., Engineering Order No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribut | te Migratio | n Path |
|------------------------------------|--------------------------------|----------------------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Engineering Change Proposal No. | Engineering Change Proposal | 332 | Engineering Change Proposal | 332 | results in |
| Engineering Order No. | Engineering Order | 333 | Approved Engineering Order | 361 | has |
| | | | | | |
| | | | | | |
| ODE: MFG/E358 (G1) | TITLE: GLOSSARY: ENG ENG | INEERING INEER!NG | ORDER USE FOR CHANGE PROPOSAL | NUMB | ER: 627 |

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 | DATE: REV: 6 7 8 9 10 | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: |
|----------|---|--|---|--------|--------|----------|
| | | Engrn. Chg. Request Results In Engrn. Chg. Reque Order No. | Appvd. Engrn. Ord. Has st No., Engrn. | | | |
| | | Engr. Ord. Use for Change Request | Engrn. | | | |
| NODE: M | FG/E359 TITLE: | ENGINEERING ORDER USE | | | UMBER: | |

3-481

| Owned Attribute Class Name: | | | | | |
|---------------------------------|--|---------------|--|---------------|---|
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Inherited | Attribute Class Owned By: | | Attribut | e Migratio | n Path |
| nherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribut Inherited From: Entity Class Name | e Migratio | Inherited Through: |
| | | Number 332 | Inherited From: | | |
| ngineering Change equest No. | Entity Class Name Engineering Change | | Inherited From: Entity Class Name Engineering Change | Number | Inherited Through: Relation Class Name |
| attribute Class(es) | Entity Class Name Engineering Change Proposal | 332 | Inherited From: Entity Class Name Engineering Change Proposal Approved Engineering | Number 332 | Inherited Through: Relation Class Name results in |

ST 252

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 6 7 8 | DATE: REV: | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: | |
|-------------|---|----------------------|---------------------------------------|--------|-----------|----------|--|
| | | | | | | | |
| | | | | | | | |
| | | Master Change Record | d No. | | | | |
| | | Master Change Record | 1 | 34 | | | |
| | | List | s | | | | |
| | | 333 | 7 | | | | |
| | | Engrn. Order | | | | | |
| NODE: MF | FG/E360 TITLE: MAS | TER CHANGE RECORD | | NU | IMBER: 63 | 0 | |

Entity Class Definition: The history of all recommended and authorized engineering changes, and all change proposal effort.

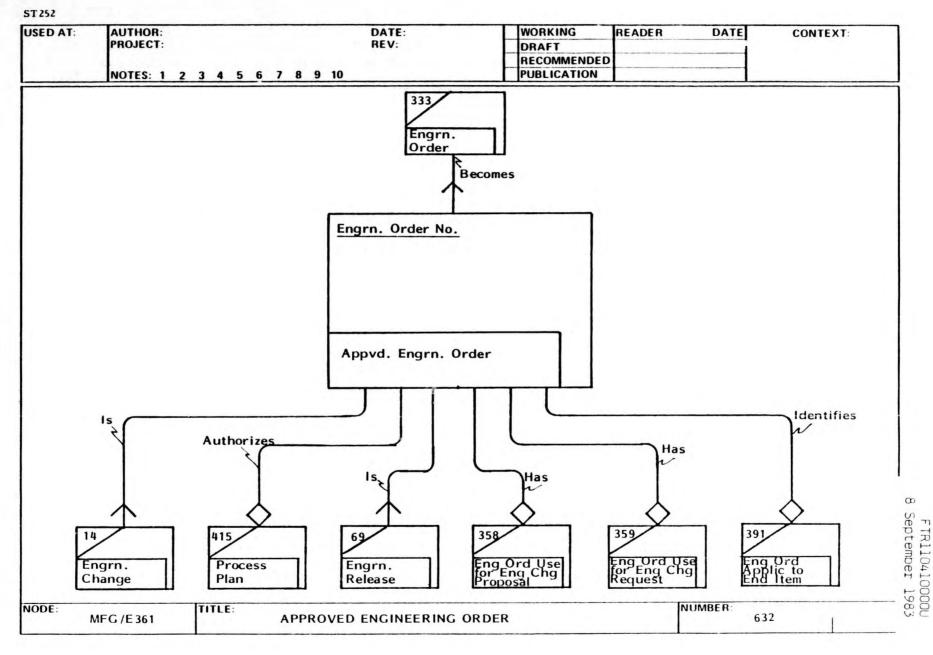
Key Classes: Master Change Record No.

Owned Attribute Classes:

Name: Master Change Record No.

Definition: A number assigned to each change record to provide identification and traceability.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ODE: MFG/E360 (G1) | TITLE: GLOSSARY: MAST | ER CHAN | GE RECORD | NUMB | BER: 631 |



3-485

FTR110410000U September 1983

633

Entity Class Definition: An engineering order that has been accepted by the proper authority.

Key Classes: Engineering Order No.

Owned Attribute Classes:

Name: Engineering Order Approval Date

Definition: The date on which the engineering order was approved.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Engineering Order No. | Enginæring Order | 333 | Engineering Order | 333 | becomes | |
| ODE: MFG/E361 (G1 |) TITLE: GLOSSARY: APPR | ROVED EN | GINEERING ORDER | NUMB | ÉR: 633 | |

FTR110410000U September 1983

3-48

Entity Class Definition: An examination or activity specified in the manufacturing project plan which describes

tests required to meet internal or external specifications.

Entity Class Synonyms: Test

Key Classes: Contract No. Test Description

Owned Attribute Classes:

Name: Test Description

Definition: A detailed explanation of how the test is to be performed and the qualifying conditions for

acceptance.

Name: Test Code/(Destruction/Non-Destruction)

Definition: A code indicating test category

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|---------------------|---------------------------|-----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Contract No. | Sales Contract | 81 | Manufacturing Project Plan | 336 | specifies | |
| ODE: MFG/E362 (G1) | TITLE: GLOSSARY: TES | ST REQUII | REMENT | NUMB | ÉR: 635 | |

Entity Class Definition: A logical segment of the end item product permitting the simultaneous production of tasks and the accumulation and reporting of costs in a significant manner.

Entity Class Synonyms: Aircraft Section

Key Classes: (Part No.) (Section No.)

Owned Attribute Classes:

Name: (Section No.)

Definition: A code which identifies the first level breakdown of an end-item product.

Name: Section Title

Definition: The name of a major section of the aircraft.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-----------------------|---------------------------|--------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| (Part No.) | Part | 6 | Part No. | 6 | is | |
| ODE: MFG /E363(G1) | TITLE: GLOSSARY: SEC | TION | | NUMB | ER: | |

TITLE:

METHOD USE

NODE:

MFG /E364

FTR110410000U 8 September 1983

NUMBER:

638

Entity Class Definition: The specific application of a given production method in a particular instance of a manufacturing activity.

Key Classes: Routing Item No., Contract No., Change No., Activity Name, Section No.

Owned Attribute Classes:

Name: Processing Allocation

Definition: The designation or consignment of specific methods of manufacture dedicated to satisfy a

stipulated method use requirement.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Routing Item No. | Routing Item | 131 | Routing Item | 131 | is employed in |
| Contract No. | Sales Contract | 81 | Section Activity | 335 | requires |
| Change No. | Statement of Work | 331 | Section Activity | 335 | requires |
| Activity Name | Activity Policy | 346 | Section Activity | 335 | requires |
| Section No. | Section | 363 | Section Activity | 335 | requires |
| | | | | | |
| IODE: MFG/E364 (G1) | TITLE: GLOSSARY: METH | OD USE | | NUMB | ER: 639 |

Entity Class Definition: A record of changes made to the "master progam schedule" or the "master operating schedule."

Entity Class Synonyms: · SCA

Key Classes: Schedule Change Request No.

Owned Attribute Classes:

Name: Schedule Change Authorization Line No.

Definition: The set of line numbers on the master program schedule that are affected by given schedule

change authorizations.

Name: Schedule Change Authorization Approval Date

Definition: The date on which an authorized employee granted approval to a schedule change

authorization.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|--------------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Schedule Change Request No. | Schedule Change Request | 338 | Schedule Change Request | 338 | becomes | |
| IODE: MFG/E365 (G1) | TITLE: GLOSSARY: SCH | EDULE CH | IANGE AUTHORIZATIO | N NUMB | BÉR: 641 | |

| USED AT: | AUTHOR: PROJECT: | | DATE: REV: | DRAFT RECOMMENDED | READER | DATE | CONTEXT: |
|----------|---------------------|---------|--|----------------------------------|--------|------|----------|
| | NOTES: 1 2 | 3 4 5 6 | Type-Version Ship Type-Version Ship Package Serial No. | Work Package Specifies No., Work | | | |
| | | | | | | | |

| Entity Class Definition: Refers to the information about a specific type version ship called out by the work packa | age . |
|--|-------|
| Key Classes: Type-Version Ship No., Work Package Serial No. | |
| Owned Attribute Classes | |

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|----------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Type-Version Ship No. | Type-Version Ship | 349 | Type-Version Ship | 349 | is referenced by | |
| Work Package Serial No. | Work Package | 380 | Work Package | 380 | specifies | |
| ODE: MFG/E366 (G1) | TITLE: GLOSSARY: TYPE | NEEDGLO. | N SHIP CALLOUT | INUMB | ic p. | |

645

Entity Class Definition: An optional deliverable that meets customers specifications (such as: pylons, external

tanks, and rocket launches).

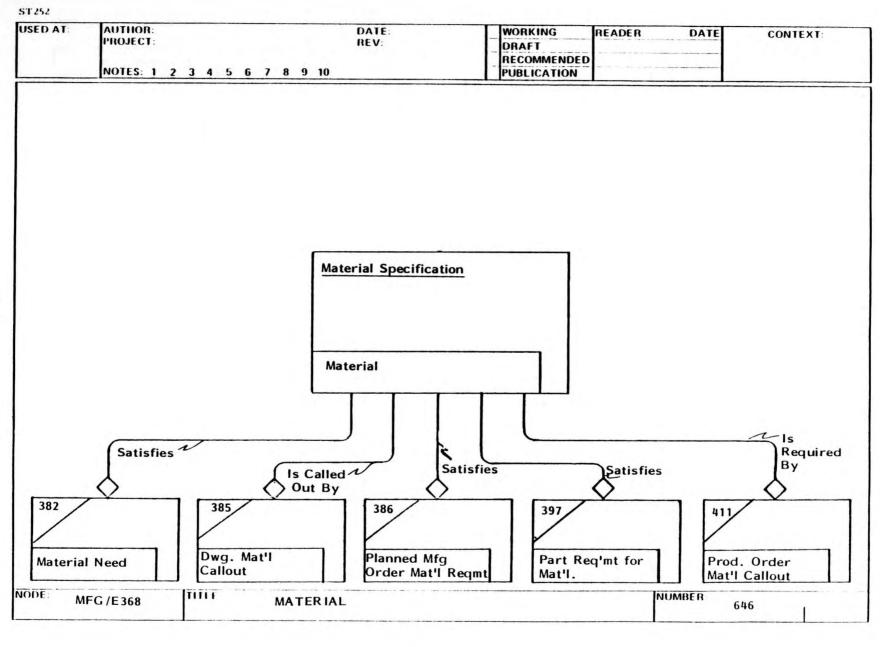
Key Classes: Part No., Configurated Item Serial No.

Owned Attributed Classes:

Name: Configurated Item Serial No.

Definition: A sequential alphanumeric code that provides independent identity to each instance of the part produced and identified to the engineering part number.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-----------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Part No. | Part | 6 | Part | 6 | is | |
| | | | | | | |
| ODE: MFG/E367 (G1) | TITLE: GLOSSARY: CON | FIGURATE | ED ITEM | NUMB | ER: 645 | |



FTR110410000U 8 September 1983

Entity Class Definition: A substance from which a product/component is made.

Key Classes: Material Specification

Owned Attribute Classes:

Name: Material Specification

Definition: The engineering information needed to buy material and/or make a component of the product.

Name: Raw Material Code Part No.

Definition: An alpha numeric representing material that is to be procured. It is used to identify parts as

well as raw stock material.

Name: Material Library Code

Definition: A numeric code used to identify the engineering data library which contains the static

or fixed information about the drawing, part number or raw material listed.

Name: Material Commodity Group

Definition: An alpha numeric code used to identify a specific group or category of material or parts.

Name: Material Average Price

Definition: An average value-per-part of a group of related parts sharing a common characteristic (e.g.,

identical material specification).

Name: Material Description

Definition: A common English language nomenclature for a given material.

NODE:

MFG/E368 (G1)

TITLE:

GLOSSARY: MATERIAL

NUMBER:

647

3-500

| JSED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT RECOMMEND | READER | DATE | CONTEXT: |
|----------|---------------------|------------------|-------------------------|--------|--------|----------|
| | NOTES: 1 2 3 4 5 6 | Resource Plan | PUBLICATION | | | |
| | | Material Plan | | | | |
| | | | | | | |
| IODE: | FG/E370 | MATERIAL PLAN | | N | UMBER: | 8 , |

Entity Class Definition: An organized logistics plan for acquiring, storing, and allocating material in an orderly, timely manner to satisfy all identified material needs.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name: Lead Time

Definition: The span time between placement of a firm order to acquire and the receipt of the acquired item.

Name: Length of Quote

Definition: The number of days through which a supplier quotation request pricing can be considered

valid and stable.

Name: Length of Quote Validity

Definition: The time span for which a bid project and delivery requirement will remain unchanged.

Name: Line Item Description

Definition: A statement identifying the procurable item to be acquired.

Name: Revision Number

Definition: An alpha numeric code that identifies the current iteration of the document's revision level.

Name: Supplement Number

Definition: An alpha numeric code identifying a formal addition to the "material cost estimate" document.

Name: Pricing Estimate

Definition: The detailed analysis of probable cost of acquiring the manufacturing materials.

Name: Buyer Estimate

Definition: The predicted price range for which subsequent material may be required.

Name: Cost Element

Definition: A single determining factor which has an impact upon the price.

Name: Cost Source

Definition: The origin of pricing data.

NODE:

MFG/E370 (G1)

TITLE:

GLOSSARY: MATERIAL PLAN

NUMBER:

649/650

NODE:

MFG/E370 (G2)

TITLE:

FTR110410000U September 1983

NUMBER:

651

Owned Attribute Classes: (Continued) Name: Cost Summary Definition: The accumulation grouping of related pricing data. **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number Resource Category Resource Need Resource Plan 399 79 is WBS No. Work Breakdown Structure Resource Plan 308 79 is Milestone Description Milestone 353 Resource Plan 79 is

GLOSSARY: MATERIAL PLAN

ST 252 USED AT: AUTHOR: PROJECT: DATE: REV: WORKING READER DATE CONTEXT: DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION Resource Plan Resource Category, WBS No., Milestone Descr. Manpower Plan NODE: MFG/E371 TITLE: NUMBER: MANPOWER PLAN 652

| œ |
|-----------|
| September |
| 0000L |

653

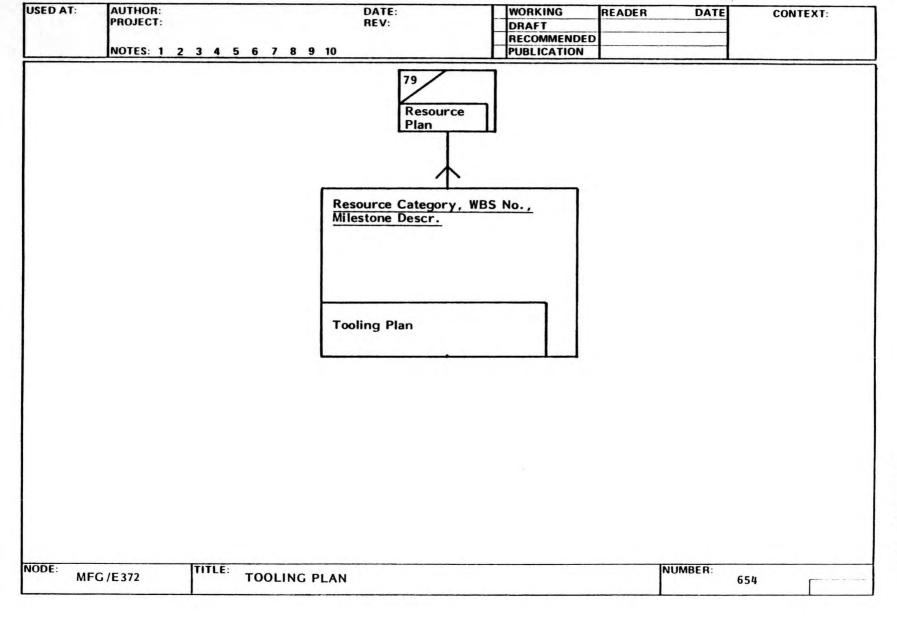
| Entity Class Defin | efinition: A detailed plan of manpower requirements by skill category and by time period to support a given project. |
|--------------------|--|
| Key Classes: | Resource Category, WBS No., Milestone Description |

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Resource Category | Resource Need | 399 | Resource Plan | 79 | is |
| WBS No. | Work Breakdown Structure | 308 | Resource Plan | 79 | is |
| Milestone Desription | Milestone | 353 | Resource Plan | 79 | is |
| | | | | | |
| ODE: MFG/E371 (G1) | TITLE: GLOSSARY: MANE | DOWED DI | AN | INUMB | FR: |

ST 252



655

Entity Class Definition: A detail plan of tooling requirements to support a given project. Key Classes: Resource Category, WBS No., Milestone Description Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---|--|-------------------|---|----------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Resource Category WBS No. Milestone Description | Resource Need Work Breakdown Structure Milestone | 399 308 353 | Resource Plan Resource Plan Resource Plan | 79 79 79 | is is |
| ODE: MFG/E372 (G1) | TITLE: GLOSSARY: TOO | LING PLAI | N | NUMB | ER: 655 |

ST 252

AUTHOR: PROJECT:

DRAFT RECOMMENDED NOTES: 1 2 3 4 5 6 7 8 9 10 PUBLICATION 79 Resource Plan LIS Resource Category, WBS No., Milestone Descr. **Facilities Plan** NODE: TITLE: MFG/E373 **FACILITIES PLAN** NUMBER: 656

WORKING

READER

DATE

CONTEXT:

DATE: REV:

657

Entity Class Definition: A plan of the required facilities to support a given project. Key Classes: Resource Category, WBS No., Milestone Description Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Resource Category | Resource Need | 399 | Resource Plan | 79 | is |
| WBS No. | Work Breakdown Structure | 308 | Resource Plan | 79 | is |
| Milestone Description | Milestone | 353 | Resource Plan | 79 | is |
| | | | | | |
| | | | | | |
| NODE: MFG/E 373 (G1) | TITLE: GLOSSARY: FACI | | | INUMB | ER: |

NODE: MFG/E373 (G1)

GLOSSARY: FACILITIES PLAN

FTR110410000U September 1983

 ∞

Entity Class Definition: A plan of the quality checks and procedures to be used on a given project.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Resource Category | Resource Need | 399 | Resource Plan | 79 | is |
| WBS No. | Work Breakdown Structure | 308 | Resource Plan | 79 | is |
| Milestone Description | Milestone | 353 | Resource Plan | 79 | is |
| | | | | | |
| NODE: MFG/E374 (G1) | TITLE: GLOSSARY: QUA | LITY CON | ITROL PLAN | NUME | BER: 659 |

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 | DATE: REV: 6 7 8 9 10 | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: |
|----------|------------------------------------|-----------------------------|---------------------------------------|--------|------------|----------------|
| | JNOTES: 1 2 3 4 5 | Resource Plan | e] | | | |
| NODE: | FG/E375 TITLE: | OUIPMENT PLAN | | - IN | UMBER: 660 |) _[|

7-51

FTR110410000U 8 September 1983

| Name: Definition: | | | | | |
|----------------------------------|---------------------------|--------|------------------------------------|--------------|--|
| | | | | | |
| Inherited Attribute Class(es) | Attribute Class Owned By: | Number | Inherited From: | ute Migratio | n Path Inherited Through: Relation Class Name: |
| esource Category | Resource Need | 399 | Entity Class Name Resource Plan | 79 | is Relation Class Name: |
| BS No. | Work Breakdown Structure | 308 | Resource Plan | 79 | is |
| ilestone escription | Milestone | 353 | Resource Plan | 79 | is |
| | | | | | 1 |
| | | | | | |

Entity Class Definition: A detail plan of the equipment needs for a given project.

Key Classes: Resource Category, WBS No., Milestone Description

Entity Class Definition: A line item on a planning parts list.

Key Classes: Engineering Order No., Drawing No., Planning Parts List Item No.

Owned Attribute Classes:

Name: Planning Parts List Item No.

Definition: A control number assigned to a component on the manufacturing bill of material.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|----------------------------|---------------------------|-----------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Engineering Order No. | Engineering Order | 333 | Planning Parts List | 396 | contains |
| Drawing No. | Drawing | 414 | Planning Parts List | 396 | contains |
| Generation Date | Planning Parts List | 396 | Planning Parts List | 396 | contains |
| Work Package Serial No. | Work Package | 380 | Work Package | 380 | contains |
| NODE: MEG/E377 (G1) | TITLE: GLOSSARY: PLAN | INING PAI | PTS LIST LTEM | NUME | BER: 663 |

FTR110410000U 8 September 1983

Entity Class Definition: Production aids which indicate nesting shapes, dimensions, type of cut, etc., necessary for creation of a part from raw material.

Key Classes: Cutting Specification ID

Owned Attribute Classes:

Name: Cutting Specification ID

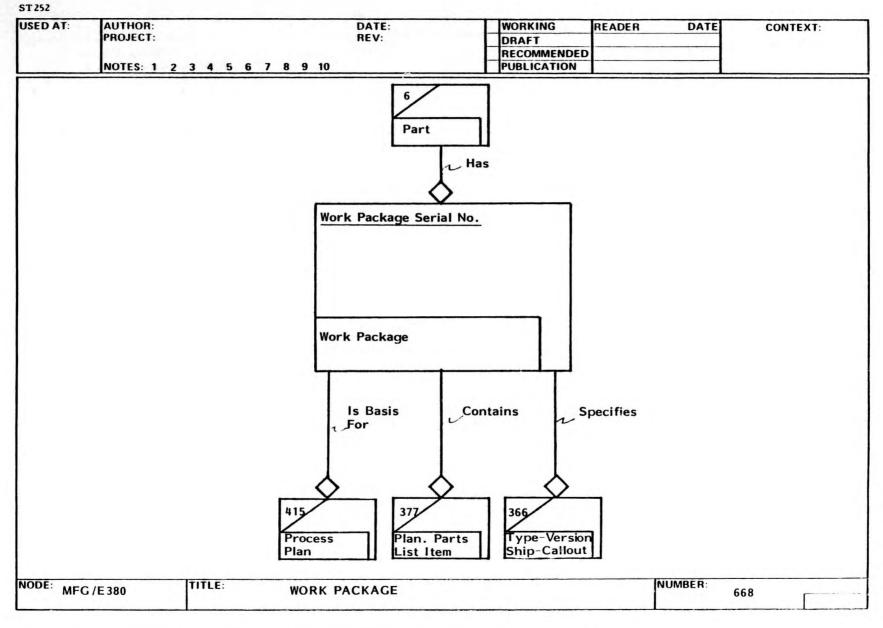
Definition: The identifier of the specification which indicates how the raw material is to be cut.

| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | | Attribute Migration Path | | |
|----------------------------------|--|--------|--------------------------------------|--------|---|
| | | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| | | | | | |
| | | | | | |
| | | | | | |
| | | h 1 | | | |
| | | | | | 14 |
| | \ | | | | |
| DDE: MFG/E378 (G1) | TITLE: GLOSSARY: CUT | | | INUMB | FR. |

ST 252 DATE: WORKING DATE USED AT: AUTHOR: READER CONTEXT PROJECT: DRAFT RECOMMENDED PUBLICATION NOIES: 1 2 3 4 5 6 7 8 9 10 Visual Aid ID Visual Aid Is Specified BY 395 Visual Aid Callout INUMBER TITLE: NODE: MFG/E379 VISUAL AID 666

667

Entity Class Definition: Illustrated production aids showing how the part looks, fits together, appears in a jig, etc. Key Classes: Visual Aid ID Owned Attribute Classes: Name: Visual Aid Definitions: The identifier of the specification which indicates how parts fit into jigs and how they are nested. **Attribute Migration Path** Inherited Attribute Class Owned By: Attribute Class(es) Inherited From: **Entity Class Name** Inherited Through: Relation Class Name: Number **Entity Class Name** Number NODE: TITLE: GLOSSARY: VISUAL AID MFG/E379 (G1) NUMBER:



3-521

FTR110410000U September 1983

Entity Class Definition: Engineering package for a specific part or assembly, including the engineering drawing, and engineering bill of material.

Key Classes: Work Package Serial No.

Owned Attribute Classes:

Name: Work Package Serial No.

Definition: A number which uniquely identifies a work package.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part No. | Part | 6 | Part | 6 | has |
| ODE: MFG/E380 (G1) | TITLE: GLOSSARY: WOR | К РАСКА | GE | NUMB | ÉR: 669 |

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
|-------------|---------------------|--|----------------------------|--------|------------|----------|
| | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | RECOMMENDED PUBLICATION | | | |
| | | Program Name, Config. Bash. Appvd. Config. Bash. Description | Becomes onfig. Basln. No. | | | |
| NODE: MF | FG/E381 | APPROVED CONFIGURATION BA | ASELINE | N | IUMBER: 67 | ′0 |

FTR110410000U 8 September 1983

671

Entity Class Definition: A configuration baseline that has been accepted by the proper authority.

Key Classes: Program Name, Configuration Baseline No.

Owned Attribute Classes:

Name: Configuration Baseline Approval Date

Definition: The calendar date on which the baseline was approved.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Program Name | Program | 347 | Configuration Baseline | 352 | becomes | |
| Configuration Baseline No. | Configuration Baseline | 352 | Configuration Baseline | 352 | becomes | |
| | | | | | | |
| MFG/E381 (G1) | TITLE: GLOSSARY: APPI | ROVED CO | ONFIGURATION BASELINE | NUMB | ER: 671 | |

673

Entity Class Definition: The requirement for a specific material to be used for the manufacture of the end item product.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name: Material Allocation

Definition: The designation or assignment of specified materials dedicated to satisfy a stipulated material

requirement.

Name: Go Ahead By

Definition: An approval signature on the supplier quotation request.

Name: Unit Cost

Definition: The price-per-piece of a uniquely identified procurable item.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|---------------------------|---------------------------|---------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Resource Category | Resource Need | 399 | Resource Need | 399 | is | |
| WBS No. | Work Breakdown Structure | 308 | Resource Need | 399 | is | |
| Milestone Description | Milestone | 353 | Resource Need | 399 | is | |
| Material Specification | Material | 368 | Material | 368 | satisfies | |
| | | | | | | |
| | | | | | | |
| ODE: MFG/E382 (G1) | TITLE: CLOSSARY, MAT | FRIAL N | | INUMB | ER: | |

ST 252

| NOTES: 1 2 3 4 5 6 7 8 9 10 RECOMMENDED PUBLICATION | USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING READE DRAFT | R DATE | CONTEXT: | |
|--|-----------|---------------------|--|---|---------|----------|--|
| End Item Planned Mfg. Order Is Wanufactured Using Contract No., End Item Serial No., Process Plan No., Line No., Part No End Item Method Occur | | NOTES: 1 2 3 4 5 | 6 7 8 9 10 | RECOMMENDED PUBLICATION | | | |
| NODE; MFG/E383 TITLE: END ITEM METHOD OCCURANCE NUMBER: | | NOTES: 1 2 3 4 5 | End Item Is Manufactur Using Contract No., End I Process Plan No., L | Planned Mfg. Order Led Serial No., ine No., Part No. | | | |
| MPG/E363 | NODE: MEC | TITLE: | END LITEM METHOD OCCUPANCE | | INUMRER | | |
| | MFC | G/E383 | END ITEM METHOD OCCURANCE | | | 74 | |

3-52

NODE:

MFG/E383 (G1)

TITLE:

Entity Class Definition: The specific application of a given production method to the manufacture of a particular instance of the end-item product. Key Classes: Contract No., End Item Serial No., Process Plan No., Line No., Part No. Owned Attribute Classes: Name: **Definition: Attribute Migration Path** Attribute Class Owned By: Inherited Inherited Through: Relation Class Name; Inherited From: Attribute Class(es) **Entity Class Name** Number Number **Entity Class Name** Sales Contract End Item 5 is manufactured using 81 Contract No. End Item Serial No. 5 End Item 5 End Item is manufactured using Planned Manufacturing Process Plan No. Process Plan 415 421 is used for Operation Planned Manufacturing **Planned Manufacturing** 421 421 is used for Line No. Operation Operation Part 6 **End Item** 5 is manufactured Part No. using

GLOSSARY: END ITEM METHOD OCCURRENCE

FTR110410000U September 1983

NUMBER:

675

| Entity Class Definition: | | A milestone whose scheduled start and/or completion date has been changed by a schedule change authorization. |
|--------------------------|----------|---|
| Key Classes: | WBS No., | Milestone Description, Scheduled Change Requisition No. |

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|-----------------------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| WBS No. | Work Breakdown Structure | 308 | Milestone | 353 | is |
| Milestone Description | Milestone | 353 | Milestone | 353 | is |
| Schedule Change Request No. | Schedule Change Request | 338 | Schedule Change Authorization | 365 | reschedules |
| ODE: MFG/E384 (G1) | TITLE: GLOSSARY: RES | CHEDULE | D MILESTONE | NUMB | ER: 677 |

ST 252

 ∞

Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute, Class Owned By: Inherited From: Inherited Through: Relation Class Name: Attribute Class(es) **Entity Class Name** Number **Entity Class Name** Number Material Material 368 Material 368 is called out by Specification **Engineering Order** Engineering Order Released Engineering 333 12 calls out No. Drawing Drawing No. Drawing 414 Released Engineering 12 calls out Drawing NOD! NUMBER: TITLE: GLOSSARY: MFG/E385 (G1) DRAWING MATERIAL CALLOUT 679

Entity Class Definition: A specific callout on a drawing which identifies the material from which the part is to be

fabricated.

Key Classes: Material Specification, Engineering Order No., Drawing No.

Entity Class Definition: Material Requirements called out by a specific planned manufacturing operation on a process plan.

Key Classes: Material Specification, Process Plan No., Line No.

Owned Attribute Classes:

Name:

| nherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|---------------------------|------------------------------------|--------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Material Specification | Material | 368 | Material | 368 | satisfies | |
| Process Plan No. | Process Plan | 415 | Planned Manufacturing Operation | 421 | calls out | |
| Line No. | Planned Manufacturing Operation | 421 | Planned Manufacturing Operation | 421 | calls out | |
| Part No. | Part | 6 | Component Part | 299 | is supported by | |
| Part No. | Part | 6 | Component Part | 299 | is supported by | |
| ODE: MFG/E386 (G1) | | | UFACTURING ATERIAL REQUIREMENT | NUMB | SER: 681 | |

| ST 252 | | | | | | | | | |
|----------|-----------------------------------|-------------------|--|--------------------------------|------------|--------|-----------|-------|------------|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 | 3 4 5 6 7 8 9 | DATE: REV: | WORK DRAF RECOI PUBLI | | READER | DATE | CONTE | XT: |
| | | | Part fies Part No., Contra Serial No., Part End Item Req'mt. | No. | —∐ ─Has | | | | |
| NODE; M | IFG /E 387 | TITLE: END ITEM R | EQUIREMENT FOR | PART | | N | UMBER: 68 | 2 | FF 10 5810 |

Entity Class Definition: The requirement for a specific part type by a specific end item. Key Classes: Part No., Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|---|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name | |
| Part No. | Part | 6 | Part | 6 | satisfies | |
| Contract No. | Sales Contract | 81 | End Item | 5 | has | |
| End Item Serial No. | End Item | 5 | End Item | 5 | has | |
| Part No. | Part | 6 | End Item | 5 | has | |
| | | | | | | |
| ODE: MFG/E387 (G1) | GLOSSARY: END FOR | ITEM REC | QUIREMENT | NUMB | ER: 683 | |

ST252

685

Entity Class Definition: A control device for collecting the cost of a fabrication lot.

Key Classes: Cost Account No., Part Lot No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Cost Account No. | Cost Account | 4 | Cost Account | 4 | is comprised of |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | has cost collected by |
| | | | . 1 | | |
| | | | | | |
| | | | | | 1 |
| | | | | | |
| | | | | | |
| ODE: MFG/E388 (G1 | GLOSSARY: FABR | RICATION | LOT SUB ACCOUNT | NUME | BÉR: 685 |

 ∞ FTR110410000U September 1983

Definition:

FTR11041000C September 198

Entity Class Definition: A WBS item for a single end-item.

Key Classes: WBS No., Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|-----------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| WBS No. | Work Breakdown Structure | 308 | WBS Item | 312 | is comprised of |
| Contract No. | Sales Contract | 81 | End Item | 5 | is comprised of |
| End Item Serial No. | End Item | 5 | End Item | 5 | is comprised of |
| Part No. | Part | 6 | End Item | 5 | is comprised of |
| | | | | | |
| MFG /E 389(G1) | TITLE: GLOSSARY: END |) ITEM WO | PRK ELEMENT | NUMB | BÉR: 687 |

AUTHOR:

| | PROJECT: | 3 4 5 6 7 8 9 | REV: | DRAFT RECOMMENDED PUBLICATION | | |
|-------|----------|---------------|--|--|---------|-----|
| | | Satisf | Rel Engrn Dwg fies Z Engrn. Order No Contract No., En | End Item Has ., Drawing No., ad Item Serial No., | | |
| | | | End Item Reqimt | For Dwg. | | |
| NODE: | | TITLE: | | | NUMBER: | |
| MFC | G/E390 | END ITEM R | EQUIREMENT FOR | DRAWING | | 688 |

WORKING

READER

DATE

CONTEXT:

DATE:

FTR110410000U 3 September 1983 Entity Class Definition: The need to apply a specific drawing to a specific end item. The serial numbers of the collected end items being the effectivity of that drawing.

Key Classes: Engineering Order No., Drawing No., Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|--------------------------|---------------------------|----------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Engineering Order No. | Engineering Order | 333 | Released Engineering Drawing | 12 | satisfies |
| Drawing No. | Drawing | 414 | Released Engineering Drawing | 12 | satisfies |
| Contract No. | Sales Contract | 81 | End Item | 5 | has |
| End Item Serial No. | End Item | 5 | End Item | 5 | has |
| Part No. | Part | 5 | End Item | 5 | has |
| ODI: MFG/E390 (G1) | TITLE: GLOSSARY: END | ITEM DEC | | INUMB | ÉR: |
| WI G/L330 (GI) | GLOSSARY: END FOR | DRAWING | UIREMENT | l tomb | 689 |

| NOTES: 1 | DATE: REV: | DRAFT RECOMMENDED PUBLICATION | A1: |
|-------------------|---------------------------------|--|----------|
| | Appvd Eng Order | End Item Is Affected By No., Contract No., No., Part No. | |
| NODE; MFG/E391 | TITLE: ENGINEERING ORDER APPLIC | CABILITY TO END ITEM 690 | <u> </u> |

FTR110410000U 8 September 1983

691

Entity Class Definition: The requirement to apply, a specific engineering order against a specific end item. The serial numbers of the specific end items collectively being the effectivity of the engineering

order.

Key Classes: Engineering Order No., Contract No., End Item Serial No., Part No.

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|--------------------------|---------------------------|---------|--------------------------------------|-------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Engineering Order No. | Engineering Order | 333 | Approved Engineering Order | 361 | identifies |
| Contract No. | Sales Contract | 81 | End Item | 5 | is affected by |
| End Item Serial No. | End Item | 5 | End Item | 5 | is affected by |
| Part No. | Part | 6 | End Item | 5 | is affected by |
| ODE: MFG/E391 (G1) | TITLE: GLOSSARY: ENGI | NEERING | ORDER | NUMB | ÉR: |

APPLICABILITY TO END ITEM

| ST 252 | | | | | | |
|----------|---------------------------------------|---|--------------------------------------|----------|---------|----------|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 | DATE: REV: 5 6 7 8 9 10 | WORKING DRAFT RECOMMENDE PUBLICATION | READER | DATE | CONTEXT: |
| | | References Routing Item No., Cutting Spec Callou | Cutting Spec, ID | pecified | | |
| NODE: M | FG/E392 | E: CUTTING SPECIFICATION CAL | LOUT | | NUMBER: | 692 |

 ∞

FTR110410000U 8 September 1983

| | on: The cutting specification of an item. ng Item No., Cutting Specification sses: | | d by the routing item to a | assist in the | e manufacturing |
|--|---|------------|---|---------------|--|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attribu Inherited From: Entity Class Name | Ite Migratio | n Path Inherited Through: Relation Class Name: |
| Routing Item No. Cutting Specification I.D. | Routing Item Cutting Specification | 131 378 | Routing Item Cutting Specification | 131 378 | References is specified by |

FTR110410000U September 1983

FTR110410000U 8 September 1983

| | , Engineering Order No. | , bruwing No. | |
|-------------------------|-------------------------|---------------|--|
| wned Attribute Classes: | | | |
| Name: | | | |
| Definition: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Attribute Class Owned By: | | Attribu | ıte Migratio | n Path |
|----------------------------|--|---|--|---|
| Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Engineering Change Request | 354 | Engineering Change Request | 354 | changes |
| Engineering Order | 333 | Released Engineering Drawing | 12 | is impacted by |
| Drawing | 414 | Released Engineering Drawing | 12 | is impacted by |
| | | | | |
| | Engineering Change Request Engineering Order | Entity Class Name Number Engineering Change Request 354 Engineering Order 333 | Entity Class Name Engineering Change Request Engineering Order Engineering Order State of the proper state of the property | Entity Class Name Number Inherited From: Entity Class Name Number Engineering Change Request 354 Engineering Change Request Engineering Order 333 Released Engineering 12 Drawing 12 Drawing 414 Released Engineering 12 |

MFG/E393 (G1)

GLOSSARY: CHANGE REQUEST DRAWING CALLOUT

NUMBER:

UMBER: 695

548

FTR110410000U 8 September 1983

Entity Class Definition: The visual aids needed by the routing item to assist in the manufacture of the part referenced by the standard routing.

Key Classes: Routing Item No., Visual Aid ID

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|--------|--------------------------------------|---------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| Routing Item No. | Routing Item | 131 | Routing Item | 131 | references |
| Visual Aid ID | Visual Aid | 379 | Visual Aid | 379 | is specified by |
| | | | | | |
| | | | | 1 | |
| | | | | | |
| *** | | | | | |

NODE: MFG/E395 (G1) TITLE:

GLOSSARY: VISUAL AID CALLOUT

NUMBER:

697

FTR110410000U 3 September 1983 Name: (

Entity Class Definition: When reconciled with engineering bill of material, the total list of detailed parts, subassemblies, assemblies, etc., which go together to form a part "as planned."

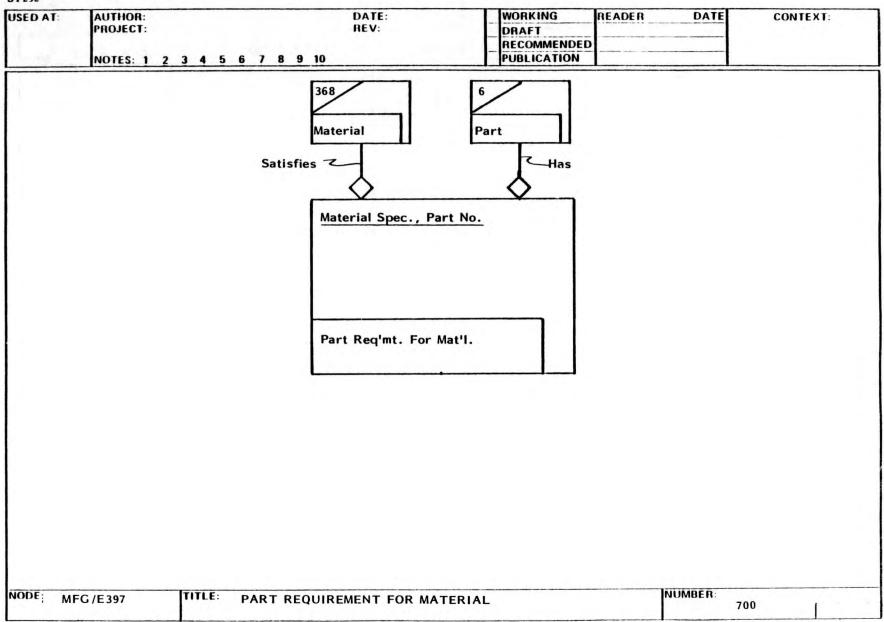
Key Classes: Engineering Order No., Drawing No., Generation Date

Owned Attribute Classes:

Name: Generation Date

Definition: The calendar date on which the planning parts list was generated.

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|--------------------------|---------------------------|----------|--------------------------------------|-------------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Engineering Order No. | Engineering Order | 333 | Released Engineering | 12 | is referenced by |
| Drawing No. | Drawing | 414 | Released Engineering Drawing | 12 | is referenced by |
| | | | | | |
| ODE: MFG/E396(G1) | TITLE: GLOSSARY: PLA | NNING PA | RTS LIST | NUMB | ÉR: 699 |



NODE: MFG/E397 (G1)

TITLE:

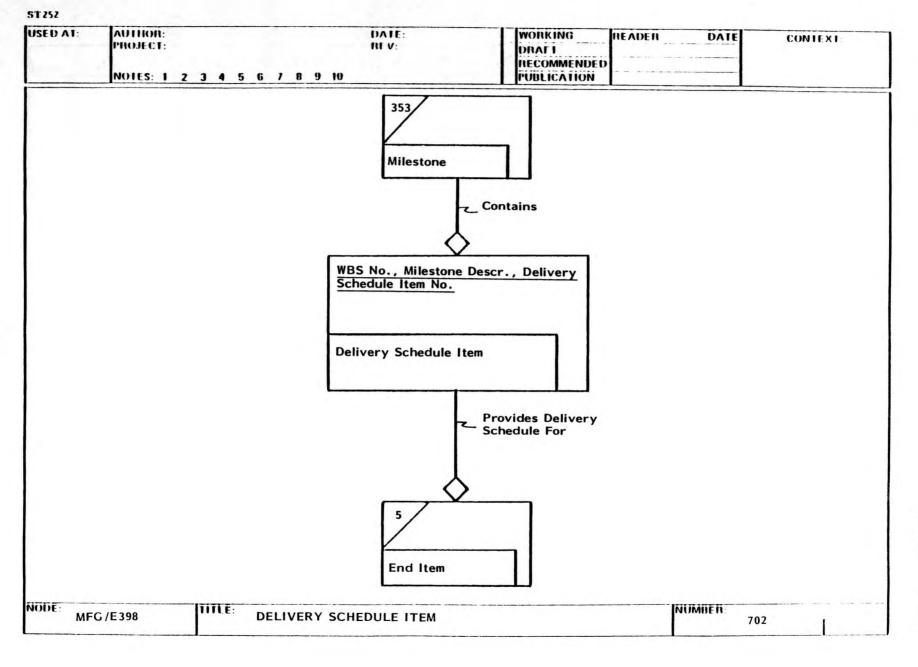
FTR110410000U 8 September 1983

NUMBER:

701

| Owned Attribute Cla | isses: | | | | |
|--|--|---------------|--|-------------------------|---|
| Name: | | | | | |
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | Attailante Class On a 1 D | | Attril | oute Migratio | n Path |
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | oute Migratio Number | _ |
| | | Number 368 | Inherited From: | T | n Path Inherited Through: Relation Class Name specifies |
| Attribute Class(es) Material pecification | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Attribute Class(es) Material pecification | Entity Class Name Material | 368 | Inherited From: Entity Class Name Material | Number 368 | Inherited Through: Relation Class Name specifies |
| Attribute Class(es) | Entity Class Name Material | 368 | Inherited From: Entity Class Name Material | Number 368 | Inherited Through: Relation Class Name specifies |

GLOSSARY: PART REQUIREMENT FOR MATERIAL



FTR110410000U September 1983

Entity Class Definition: One unique deliverable end-item contained in the contract delivery schedule.

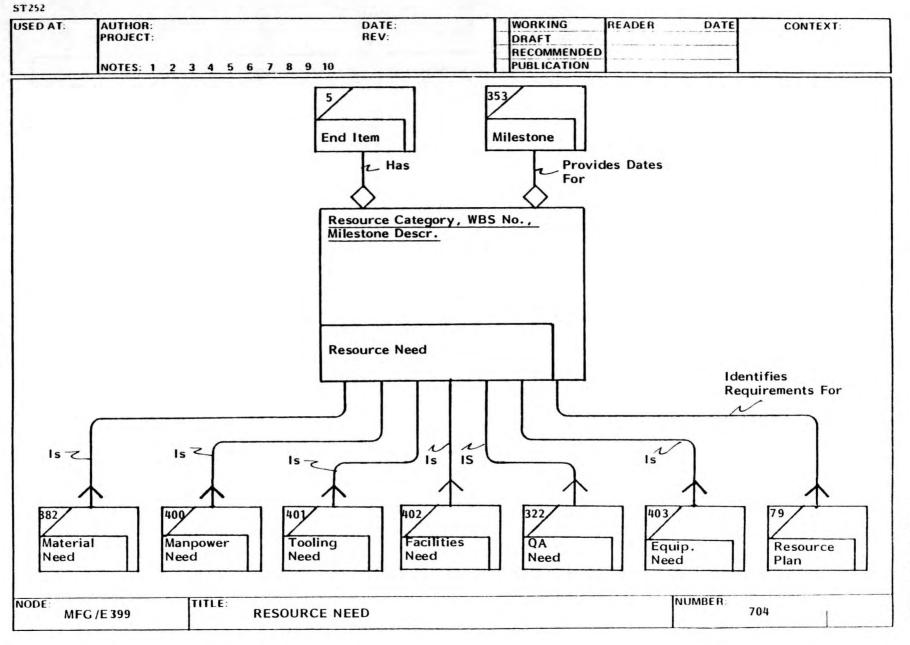
Key Classes: WBS No., Milestone Description, Delivery Schedule Item No.

Owned Attribute Classes:

Name: Delivery Schedule Item No.

Definition: A number assigned to each item on a delivery schedule.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| WBS No. | WBS | 308 | Milestone | 353 | contains |
| Milestone Description | Milestone | 353 | Milestone | 353 | contains |
| | | | | | |
| | | | | | |
| | | | | | |
| 1.3 | | | | | |
| ODE: MFG/E398 (G1) | TITLE: GLOSSARY: DELI | VERY SCI | HEDULE ITEM | NUMB | ER: 703 |



FTR110410000U September 1983

Entity Class Definition: The requirement for a specific resource to perform a specific task in the manufacture of

an end-item for the project.

Key Classes: Resource Category, WBS No., Milestone Descr.

Owned Attributed Classes:

Name: Resource Category

Definition: A designation identifying the resource type.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|-----------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| WBS No. | Work Breakdown Structure | 308 | Milestone | 353 | provides dates for |
| Milestone Description | Milestone | 353 | Milestone | 353 | provides dates for |
| Contract No. | Sales Contract | 81 | End Item | 5 | has |
| End Item Serial No. | End Item | 5 | End Item | -5 | has |
| Part No. | Part | 6 | End Item | 5 | has |
| ODE: MFG/E399 (G1) | TITLE: GLOSSARY: RES | OURCE NE | ED | NUMB | ÉR: 705 |

FTR110410000U September 1983

| PROJECT: NOTES: 1 2 3 4 5 6 7 8 9 10 Resource Need Resource Category, WBS No., Milestone Descr. Manpower Need | | Lugue - | | | | T INSERTED | 122222 | 51 | |
|--|----------|--------------|-------|---------|--|-------------|--------|-------------|----------|
| NOTES: 1 2 3 4 5 6 7 8 9 10 RESOURCE Need RESOURCE Category, WBS No., Milestone Descr. Manpower Need Notes: 1 2 3 4 5 6 7 8 9 10 Resource Need Notes: 1 2 3 4 5 6 7 8 9 10 Resource Need Notes: 1 2 3 4 5 6 7 8 9 10 Resource Need Notes: 1 2 3 4 5 6 7 8 9 10 Notes: 1 2 | JSED AT: | PROJECT: | | | DATE: REV: | | HEADER | DATE | CONTEXT: |
| Resource Need Is Resource Category, WBS No., Milestone Descr. Manpower Need | | | | | | RECOMMENDED | | | |
| Resource Need Is Resource Category, WBS No., Milestone Descr. Manpower Need | | NOTES: 1 2 3 | 4 5 | 6 7 8 9 | 10 | PUBLICATION | | | |
| ODE: TITLE: NUMBER: | | | | | Resource Need Resource Category, Milestone Descr. | | | | |
| DDE: TITLE: NUMBER: | | | | | | | | | |
| ODE: ITITLE: INUMBER: | | | | | | | | LIMANE D. | |
| MFG/E400 MANPOWER NEED 706 | DDE: | FG/E400 | ITLE: | MANPOWE | R NEED | | N | TUMBER: 706 | |

707

Entity Class Definition: The requirement for a specific manpower skill during a specific time period to perform a task(s) in the manufacture of an end-item.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|----------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Resource Category | Resource Need | 399 | Resource Need | 399 | is |
| WBS No. | Work Breakdown Structure | 308 | Resource Need | 399 | is |
| Milestone Description | Milestone | 353 | Resource Need | 399 | is |
| | | | | | |
| | | | | | |
| ODE: MFG/E400 (G1) | TITLE: GLOSSARY: MAN | POWER NE | ED | NUMB | ER: 707 |

| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 | DATE: REV: 5 6 7 8 9 10 | WORKING READER DRAFT RECOMMENDED PUBLICATION | DATE | CONTEXT |
|----------|---------------------------------------|-------------------------------|--|-------------|---------|
| | profits. I 2 3 4 | Resource Need | | | |
| NODE: MF | FG /E401 | E: TOOLING NEED | | NUMBER: 708 | |

FTR110410000U 8 September 1983

FTR110410000U September 1983

NUMBER:

709

Entity Class Definition: The requirement for a specific tool of special characteristics to be used in the tasks in the manufacture of end-items. Key Classes: Resource Category, WBS No., Milestone Description Owned Attribute Classes: Name: **Definition: Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Attribute Class(es) **Entity Class Name** Inherited Through: Relation Class Name; Number **Entity Class Name** Number Resource Category Resource Need Resource Need 399 399 is WBS No. Work Breakdown Structure 308 Resource Need 399 is Milestone Milestone 353 Resource Need 399 is Description

NODE: MFG/E401 (G1)

TITLE:

GLOSSARY: TOOLING NEED

USED AT:

AUTHOR: PROJECT:

RECOMMENDED PUBLICATION NOTES: 1 2 3 4 5 6 7 8 9 10 399 Resource Need 2 Is Resource Category, WBS No., Milestone Descr. **Facilities Need** NUMBER: NODE: TITLE: 710 MFG/E402 **FACILITIES NEED**

WORKING

DRAFT

READER

DATE

CONTEXT:

DATE:

REV:

FTR110410000U 8 September 1983

711

Entity Class Definition: The requirement for special-purpose facilities, complete with furnishings (instrumentation, electronics, etc.), to be used in the manufacture of product end-items.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|--------------------------|---------------------------|--------|--------------------------------------|--------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Resource Category | Resource Need | 399 | Resource Need | 399 | is |
| WBS No. | Work Breakdown Structure | 308 | Resource Need | 399 | is |
| Milestone Description | Milestone | 353 | Resource Need | 399 | is |
| | | | | | |
| DDE: , MFG /E 402 (G1) | TITLE: GLOSSARY FACI | | | INUMB | |

ST 252 USED AT:

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | DRAFT RECOMMENDED | DER DATE | CONTEXT: | |
|----------|----------------------|---------------------------------------|-------------------|-----------|----------|---|
| | NOTES: 1 2 3 4 5 6 7 | 8 9 10 | PUBLICATION | | | = |
| | | 333 | | | | |
| | | Resource Need | е | | | |
| | | | ——↓↓ ⊂—Is | | | |
| | | 1 | | | | |
| | | Bassimas Catalogue | WDC N- | | | |
| | | Resource Category Milestone Descr. | , WBS NO., | | | |
| | | | | | | |
| | | | 43 | | | |
| | | | | | | |
| | | Equipment Need | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| NODE: MF | G/E403 TITLE: EQUIP | MENT NEED | | NUMBER: 7 | 12 | |
| | | | | | | - |

FTR110410000U 3 September 1983

Entity Class Definition: The requirement for specific equipment - power supplies, fork-lifts, lighting, etc. - to be used in the tasks during the manufacture of end-items for the project.

Key Classes: Resource Category, WBS No., Milestone Description

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | |
|---------------------------|---------------------------|---------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Resource Category WBS No. | Resource Need | 399 | Resource Need | 399 | is |
| WB3 NO. | Work Breakdown Structure | 308 | Resource Need | 399 | is |
| Milestone Description | Milestone | 353 | Resource Need | 399 | is |
| ODE: MFG/E403 (G1) | TITLE: GLOSSARY: EQUI | PMENT N | EED | NUMB | ÉR: 713 |

NODE:

MFG/E404 (G1)

TITLE:

GLOSSARY:

FTRli0410000U September 1983

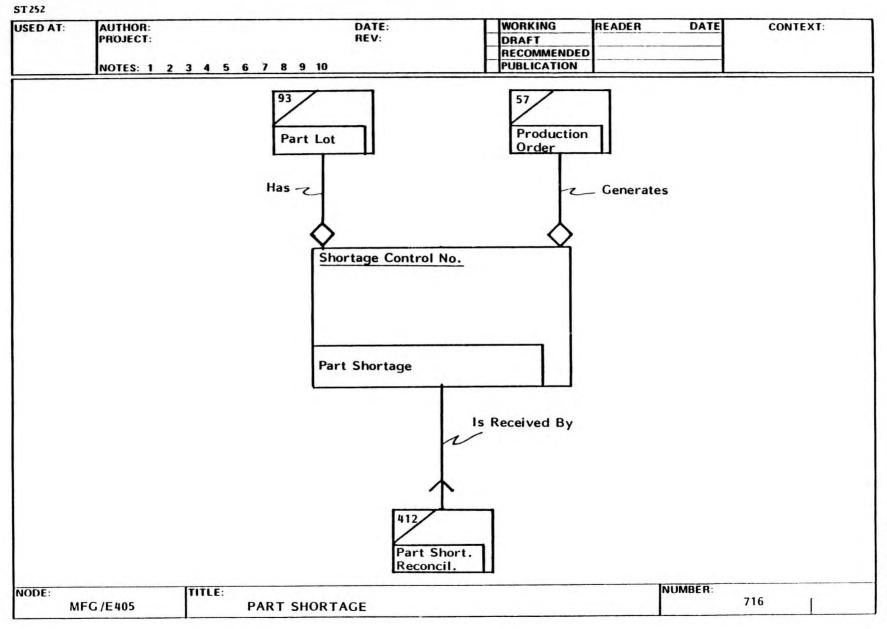
Key Classes: Program Name, Configuration Baseline No., Engineering Order No., Drawing No. Owned Attribute Classes: Name: Definition: **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Attribute Class(es) Inherited Through: Relation Class Name: **Entity Class Name** Number **Entity Class Name** Number Program Name Program 347 **Approved Configuration** 381 has Baseline Configuration Configuration Baseline 352 **Approved Configuration** 381 has Baseline No. Baseline **Engineering Order Engineering Order** 333 Released Engineering 12 has No. Drawing Drawing No. Drawing Released Engineering 414 12 has Drawing

DRAWING APPLICABILITY TO CONFIGURATION BASELINE

NUMBER:

715

Entity Class Definition: The applicability of a specific drawing to a specific approved configuration baseline.



FTR110410000U September 1983

Entity Class Definition: Additional detail part requirements created by scrap and/or misplaced parts.

Key Classes: Shortage Control No.

Owned Attribute Classes:

Name: Shortage Control No.

Definition: A uniquely identifying number applied to specific part shortage occurrence.

| Inherited | Attr:bute Class Owned By: | | Attribute Migration Path | | |
|----------------------|---------------------------|--------------|--------------------------------------|--------|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; |
| Part Lot No. | Part Lot | 93 | Part Lot | 93 | has |
| Production Order No. | Production Order | 57 | Production Order | 57 | generates |
| | | | | | |
| ODE: MFG/E405 (G1) | TITLE: GLO. AF | RT SHORT | AGE | NUMB | PER: 717 |

FTR110410000U 8 September 1983

| USED A1: | NOTES: 1 2 | 3 4 5 6 7 8 9 | DATE: Rt V: | WORKING DRAFT RECOMMENDED PUBLICATION | EADEN DATE | CONTEXT |
|----------|------------|-----------------|---------------------------|---------------------------------------|------------|---------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | Stop Order No. | | | |
| | | | | | | |
| | | | Stop Order | | | |
| | | | | Names | | |
| | | | Stop Order Application | | | |
| NODE: MF | G/E406 | IIILE: STOP ORD | <u> </u> | | NUMBER: | 718 |

 ∞

3-57]

Key Classes: Stop Order No.

Name: Stop Order No.

Owned Attribute Classes:

Inherited Attribute Class Owned By: **Attribute Migration Path** Attribute Class(es) Inherited From: **Entity Class Name** Inherited Through: Relation Class Name; Number **Entity Class Name** Number NODE: TITLE: GLOSSARY: STOP ORDER MFG/E406 (G1) NUMBER: 719

Entity Class Definition: Represents a hold on the performance of work required by a production order.

Definition: A uniquely identifying number assigned to each given stop order.

FTR110410000U September 1983

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | DRAFT | READER | DATE | CONTEXT | |
|----------|---------------------|-------------------------------|--------------------------|--------|-----------|---------|---|
| | NOTES: 1 2 3 | 4 5 6 7 8 9 10 | RECOMMENDED PUBLICATION | | | | |
| | | 411 | | | | | |
| | | V | | | | | |
| | | Prod Or Mat'l. C | all. | | | | |
| | | | Specified A Check For | | | | |
| | | | | | | | |
| | | Prod. Order No. | 1 | | | | |
| | | 1 | | | | | |
| | | 1 | İ | | | | |
| | | 1 | 1 | | | | |
| | | | | | | | |
| | | Availiability of Mate | erial | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | 4 | | | | | | |
| | | | | | | | |
| | | | | | | | |
| NODE: MF | FG/E407 | TLE: AVAILABILITY OF MATERIAL | | | NUMBER: 7 | 20 | _ |
| | | | | | | | |

721

Entity Class Definition: Reflects the confirmation of the availability of exotic or selected material.

Key Classes: Production Order No.

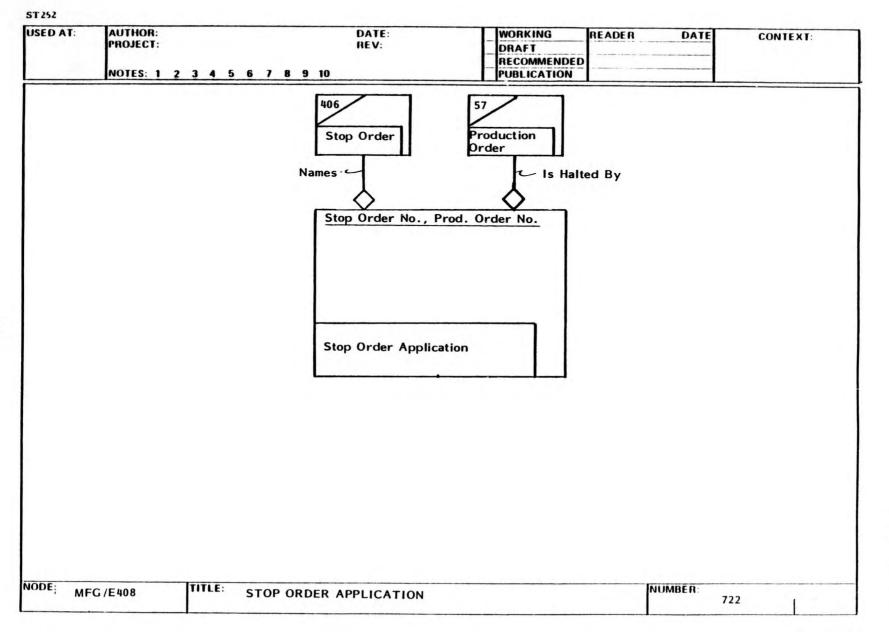
Owned Attribute Classes:

Name: Material Quantity

Definition: The number of units of material required to make a particular part as called out on the

production order.

| Inherited | Attribute Class Owned By: | Class Owned By | | Attribute Migration Path | | |
|-------------------------|---------------------------|----------------|--------------------------------------|--------------------------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Production Order No. | Production Order | 57 | Production Material Callout | 411 | specifies a check for | |
| ODE: MFG/E407 (G1) | TITLE: GLOSSARY: AVAI | LABILITY | OF MATERIAL | NUMB | ER: 721 | |



NODE: MFG/E408 (G1)

TITLE:

FTR110410000U 8 September 1983

NUMBER:

723

| Name: | | | | | |
|----------------------------------|--|---------------|--|----------------|--|
| Definition: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | T | т — | T | | |
| Inherited | Attribute Class Owned By: | | | oute Migration | |
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attrib Inherited From: Entity Class Name | oute Migration | n Path Inherited Through: Relation Class Name |
| | | Number 406 | Inherited From: | | |
| Attribute Class(es) | Entity Class Name | | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Stop Order No. Production Order | Entity Class Name Stop Order | 406 | Inherited From: Entity Class Name Stop Order | Number 406 | Inherited Through: Relation Class Name names |

GLOSSARY: STOP ORDER APPLICATION

| USED AT: | AUTHOR: PROJECT: | DATE: REV: | WORKING DRAFT | READER | DATE | CONTEXT: |
|----------|---------------------|--------------------|------------------|--------|------------|----------|
| | | | RECOMMENDED | | | |
| | NOTES: 1 2 3 | 4 5 6 7 8 9 10 | PUBLICATION | | | |
| | | | | | | |
| | | 6 | | | | |
| | | Part | 7 | | | |
| | | <u></u> | | | | |
| | | | appears As | | | |
| | | | Appears As | | | |
| | | ľ | | | | |
| | | \diamond | | | | |
| | | Schedule No., Sche | edula Data | | | |
| | | Part No. | dule Date, | | | |
| | | | | | | |
| | | J. 1 | . 11 | | | |
| | | | | | | |
| | | Scheduled Part | | | | |
| | | Jonesdied Fart | | | | |
| | | | | | | |
| | | | Has | | | |
| | | | / | | | |
| | | 1/ | | | | |
| | | 1 | | | | |
| | | | | | | |
| | | 57 | | | | |
| | | | _ | | | |
| | | Production Order | on | | | |
| VODE | | | | | | |
| MFG.E | 409 | SCHEDULED PART | | N | UMBER: 724 | |

Entity Class Definition: A part which is uniquely identifiable based on specific schedule information such as start and completion dates.

Key Classes: Schedule No., Schedule Date, Part No.

Owned Attribute Classes:

Name: Schedule No.

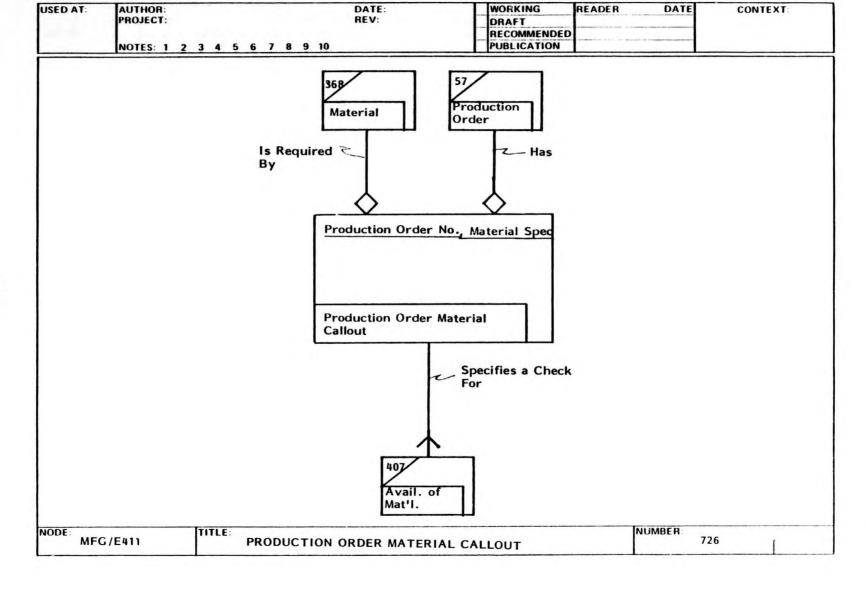
Definition: The number assigned to a part delivery schedule for unique identification and traceability.

Name: Schedule Date

Definition: The calendar date on which a particular part is due to be delivered.

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|----------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | appears as |
| | | | | | |
| ODE: MFG/E409 (G1) | TITLE: GLOSSARY: SCH | EDULED F | PART | NUMB | ER: 725 |

ST 252



| 5 | 6 |
|---|---|
| 0 | ĭ |
| - | V |
| | - |

Production Order

MFG/E411 (G1)

No.

Material

Specification

Production Order

Material

TITLE:

Relation Class Name:

FTR110410000U 3 September 1983

| | ion: The callout on the produ action Order No., Material Spec asses: | | er specifying the materi | al to be used | to fabricate a part. |
|----------------------------------|--|--------|--|---------------|---------------------------|
| Inherited Attribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Attril Inherited From: Entity Class Name | oute Migratio | n Path Inherited Through: |

57

368

GLOSSARY: PRODUCTION ORDER MATERIAL CALLOUT

Production Order

Material

57

368

NUMBER:

has

is required by

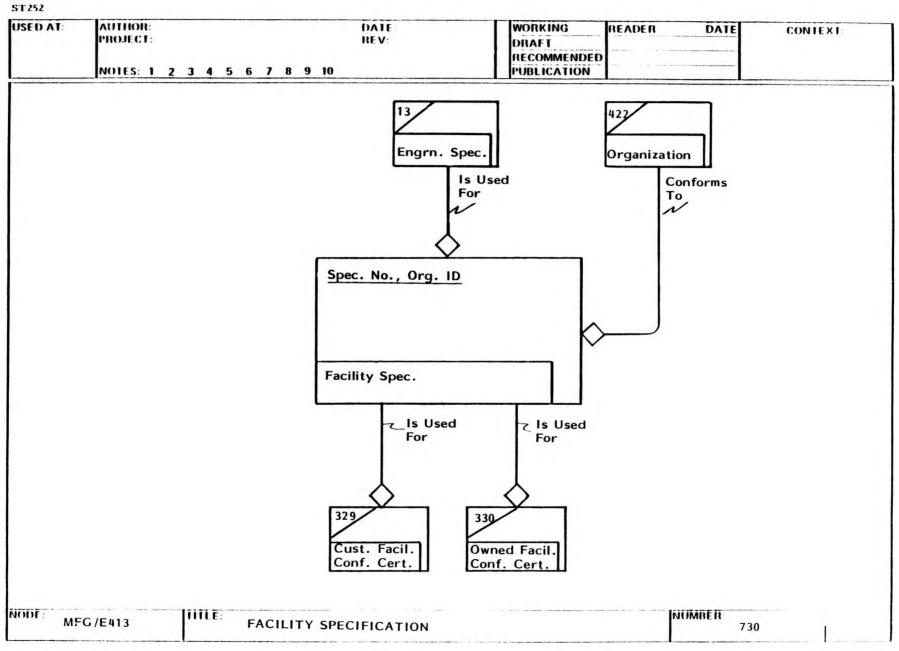
727

ST 252 AUTHOR: PROJECT: USED AT: DATE: WORKING READER DATE CONTEXT: REV: DRAFT RECOMMENDED PUBLICATION NOTES: 1 2 3 4 5 6 7 8 9 10 Part Production Shortage Order **∠**Is Updated Is Relieved By By Shortage Control No. Part Shortage Reconcil. NODE: TITLE: NUMBER: MFG/E412 728 PART SHORTAGE RECONCILIATION

3-580

| 1 | L | 1 | |
|---|---|---|--|
| | 1 | ĭ | |
| 1 | ĺ | ر | |
| (| | Ì | |
| | | | |

| ttribute Class (es) Entity Class Name Number Inherited From: Entity Class Name Number Number Inherited From: Entity Class Name Number Number Part Shortage 405 Part Shortage Froduction Order Production Order | Name: | | | | | |
|---|---|---------------------------|--------|--------------------------------------|----------------|---|
| ttribute Class(es) Entity Class Name Number Inherited From: Entity Class Name Number Number Inherited From: Entity Class Name Number Relation Class Name to a served by Part Shortage Production Order Production Order Production Order | Definition: | | | | | |
| hortage Control o. Part Shortage 405 Part Shortage 405 Is received by | | | | | | |
| hortage Control Part Shortage 405 Part Shortage is received by | | Attribute Class Owned By: | | | oute Migration | n Path |
| Production Order Production Order 57 Production Order 57 is updated by | | | Number | Inherited From: | | n Path Inherited Through: Relation Class Name |
| | nherited attribute Class(es) shortage Control | Entity Class Name | -7 | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |



3-58

FTR110410000U September 1983

Entity Class Definition: The use of an engineering specification to specify factory requirements.

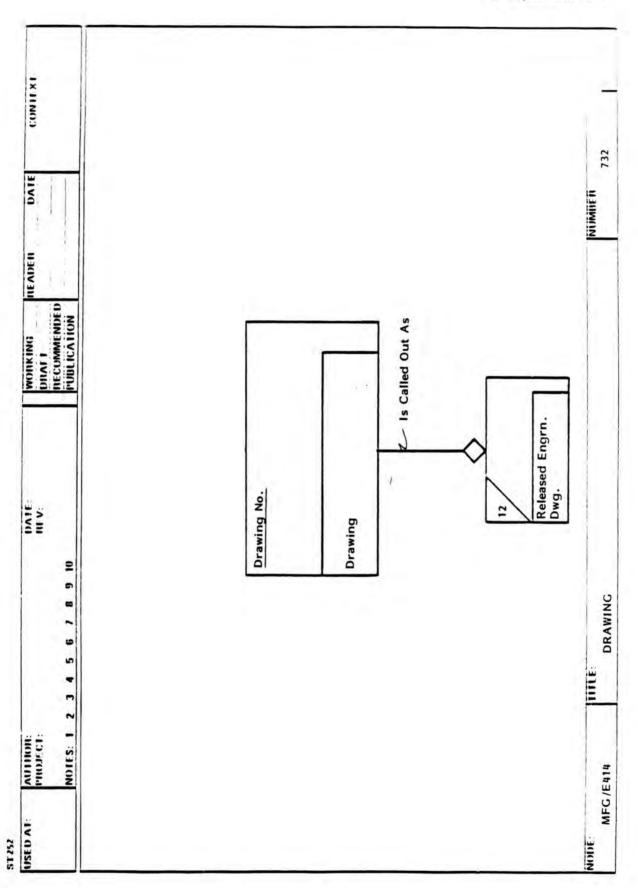
Key Classes: Specification No., Org. ID

Owned Attribute Classes:

Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attri | bute Migratio | n Path |
|---------------------|---------------------------|----------|--------------------------------------|---------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Specification No. | Engineering Specification | 13 | Engineering Specification | 13 | is used for |
| Organization ID | Organization | 422 | Organization | 422 | conforms to |
| | | | | | |
| DE: | | | | | |
| MFG/E413 (G1) | GLOSSARY: FACI | LITY SPE | CIFICATION | NUMBI | FR: 731 |



Entity Class Definition: A representation of an object which reflects its geometric configuration, dimensions and construction (form, fit and function).

Entity Class Synonyms: Blueprint, Engineering Drawing, Brownline

Key Classes: <u>Drawing No.</u> Owned Attribute Classes:

Name: Drawing Number

Definition: A unique identifier assigned to an engineering drawing to provide identification.

Name: Sheet Number

Definition: An alpha numeric code identifying the sequential order of all the sheets (or pages) of an

engineering drawing.

Name: Class Type

Definition: A code identifying the drawing category (e.g., "new", "revised", "deleted", etc.)

Name: Drawing Next Assembly

Definition: The drawing of the assembly of which the part is an immediate component.

Name: Drawing Name

Definition: A descriptive noun or phrase that is used to identify the subject of a drawing.

Name: Drawing Bill of Material

Definition: The structured alpha numeric matrix that identifies all the component details or dependent

materials which comprise the part, as defined by the engineering drawing.

Name: Fuselage Sequence Number

Definition: A structured alpha numeric code that indicates sequential order through the production line operations.

Name: Configurated Item Affected

Definition: An alpha numeric code identifying an item requires accountability tracking by serialized identity.

Name: Drawing Revision Letter

Definition: A letter code that is used to indicate the latest issue (release) of the drawing.

NODE:

MFG/E414 (G1)

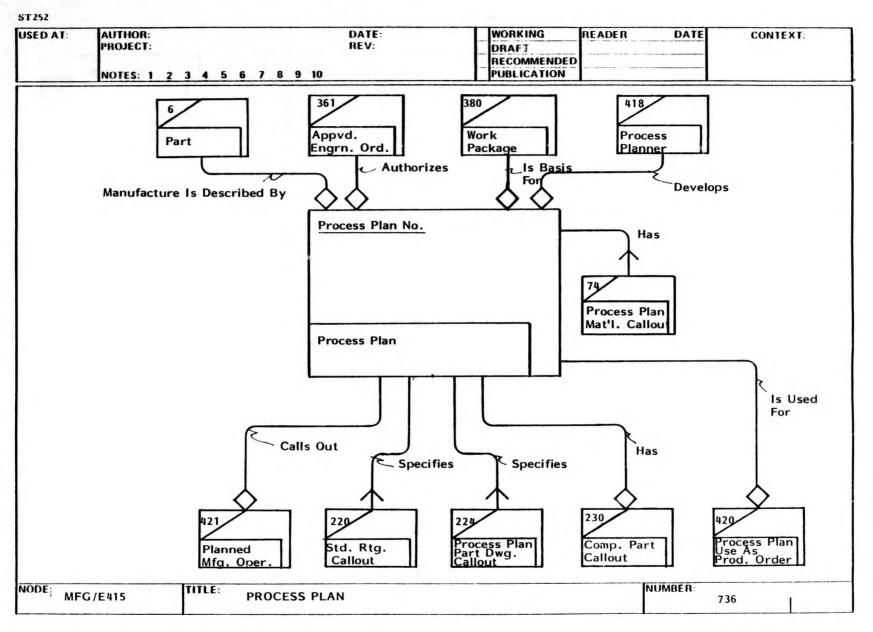
TITLE:

GLOSSARY: DRAWING

NUMBER:

733/734

| Name: Draw | asses: (Continued) ing Approval Date The date of issue of the latest | drawing. | | | |
|---------------------|--|----------|--------------------------------------|---------------|--|
| | | | | | |
| nherited | Attribute Class Owned By: | | Attril | oute Migratio | n Path |
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: |
| | | | | | |
| | | | | | |
| | | | l | 10 | |
| | | | | |) 's 0 ; |
| | | | | | |



FTR110410000U 3 September 1983

Entity Class Definition: A detailed plan for production of a part or assembly. It includes operations, tool

callouts, and departments in sequence plus specifications of how to perform those

operations.

Key Classes: Process Plan No.

Owned Attribute Classes:

Name: Process Plan No.

Definition: A unique number assigned to each process plan for identification.

Name: Process Plan Reason Code

Definition: A code which is used to identify the reason or cause for generating the process plan.

| Inherited | Attribute Class Owned By: | | Attribu | te Migratio | n Path |
|----------------------------|---------------------------|-----------|--------------------------------------|-------------|---|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name |
| Part No. | Part | 6 | Part | 6 | manufacture is described by |
| Engineering Order No. | Engineering Order | 333 | Approved Engineering Order | 361 | authorizes |
| Work Package Serial No. | Work Package | 380 | Work Package | 380 | is basis for |
| Process Planner No. | Process Planner | 418 | Process Planner | 418 | develops |
| ODE: MFG/E415 (G1) | TITLE: GLOSSARY: PRO | OCESS PLA | AN | NUMB | PER: 737 |

| SED AT: | AUTHOR: PROJECT: NOTES: 1 2 3 4 5 6 | DATE: REV: 7 8 9 10 | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEXT: |
|---------|---|----------------------------------|---------------------------------------|--------|------------|----------|
| | | Std. Routing No. Routing Header | d Las | | | |
| DDE: MF | G/E416 TITLE: RC | OUTING HEADER | | N | JMBER: 738 | |

| ∞ | |
|-----------|----------|
| September | FTR11041 |
| 1983 | 0000U |

| Definition: | | | | | |
|------------------------------|--|--------|------------------------------------|----------------|---|
| herited tribute Class(es) | Attribute Class Owned By: Entity Class Name | Number | Inherited From: | oute Migration | n Path Inherited Through: Relation Class Name |
| andard Routing | Standard Routing | 58 | Entity Class Name Standard Routing | Number 58 | Relation Class Name |
| | | | | | |

3-59

FTR110410000U 8 September 1983

741

Entity Class Definition: The use of standard routing as a routing item.

Key Classes: Standard Routing No., Routing Item No.

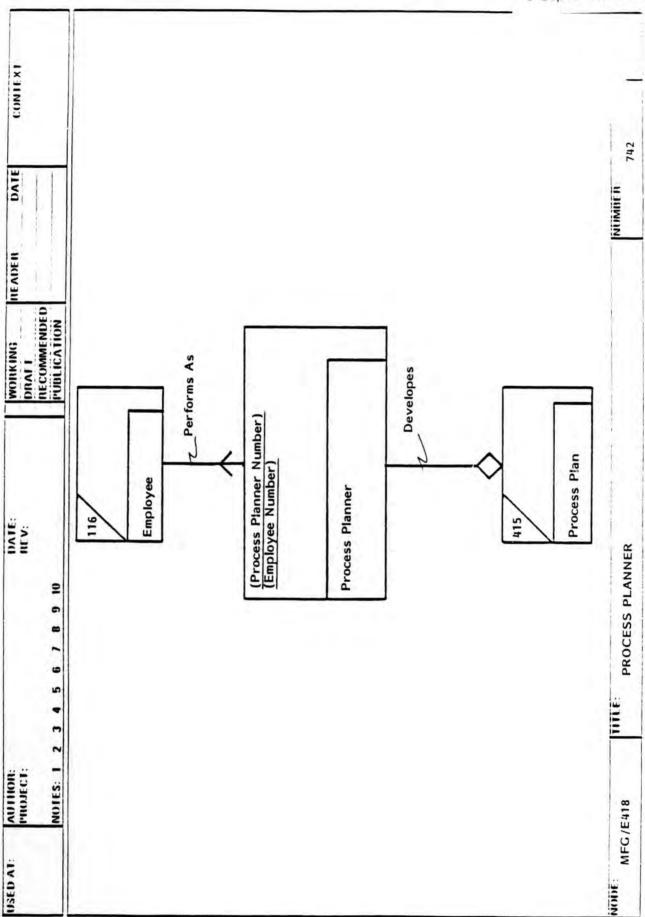
Owned Attribute Classes:

Definition:

Name:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|----------------------|---------------------------|----------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | |
| Standard Routing No. | Standard Routing | 58 | Standard Routing | 58 | has | |
| Routing Item No. | Routing Item | 131 | Routing Item | 131 | has | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| ODE: MFG/E417 (G1) | TITLE: GLOSSARY: ROU | TING ITE | M/STANDARD ROUTING | NUMB | ER: 7/11 | |

AND PROPERTY AND PROPERTY OF THE RESERVE OF THE SECOND PROPERTY OF THE SECOND PROPERTY OF THE PROPERTY OF THE PARTY OF THE



ST 252

Entity Class Definition: A person that specifies manufacturing operations and sequences them in the process plan.

A person that assigns parts of a manufacturing lot.

Key Classes: (Process Planner No.) (Employee No.)

Owned Attribute Classes:

Name: (Process Planner No.)

Definition: A unique identification number assigned to each process planner.

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | | |
|---------------------|---------------------------|----------|--------------------------------------|--------|--|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | | |
| (Employee No.) | Employee | 116 | Employee | 116 | performs as | | |
| | | | | | | | |
| ODE: MFG/E418 (G1) | TITLE GLOSSARY: PRO | CESS PLA | NNER | NUMB | ER: 743 | | |

| NUMBER: | 746 | |
|---------|-----|--|

| SED AT: | AUTHOR: | DATE: | WORKING | READER | DATE | CONTEXT: |
|---------|--------------------|---------------------|----------------|--------|---------|----------|
| | PROJECT: | REV: | DRAFT | | | |
| | | | RECOMMENDE | D | | |
| | NOTES: 1 2 3 4 5 6 | 7 8 9 10 | PUBLICATION | | | |
| | | 415 | | | | |
| | | 1,113 | 57 | | | |
| | | Process Plan | Prod. Order | | | |
| | | | rrou. order | | | |
| | | പs Used | ح Has | | | |
| | | ↓ For | | | | |
| | | \Diamond | <u> </u> | | | |
| | | Process Plan No., F | rod. Order No. | | | |
| | | | | | | |
| | | | | | | |
| | | 1 | | | | |
| | | 1 | 4 | | | |
| | | l l | | | | |
| | | | | | | |
| | | Process Plan Use As | Prod. Order | | | |
| | | | | | | |
| | | <u> </u> | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DDE: | TITLE: | | | | IUMBER: | |

Entity Class Definition: The use of a process plan as a production order. Key Classes: Process Plan No., Production Order No. Owned Attribute Classes:

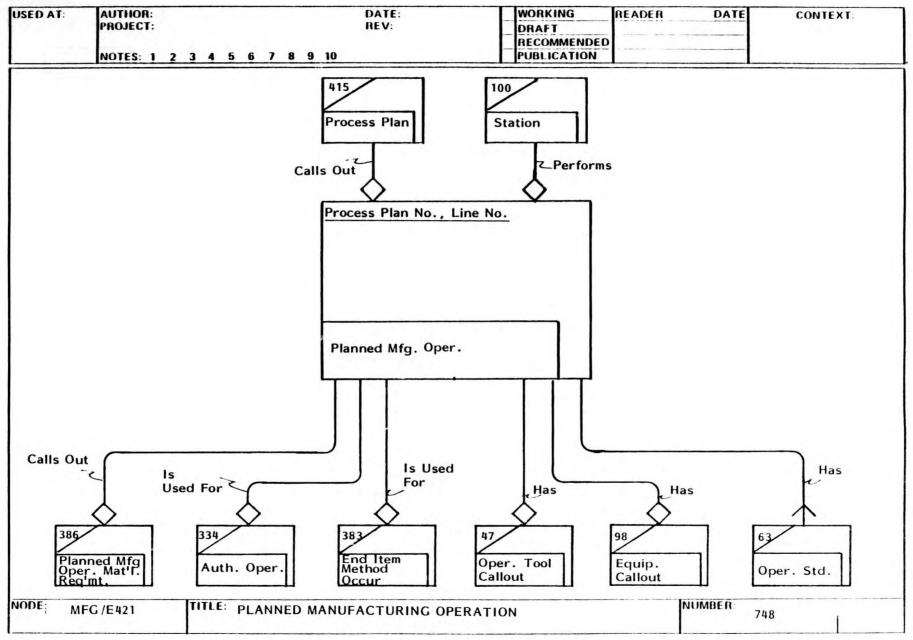
Name:

Definition:

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | |
|-------------------------|---------------------------|----------------------|--------------------------------------|--------|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; | |
| Process Plan No. | Process Plan | 415 | Process Plan | 415 | is used for | |
| Production Order No. | Production Order | 57 | Production Order | 57 | has | |
| | | | | | | |
| DDE: MFG/E420 (G1) | TITLE: GLOSSARY : PROCI | ESS PLAN UCTION O | USE AS RDER | NUMB | ÉR: 747 | |

FTR110410000U September 1983

3-598



Entity Class Definition: An individual function which is required to accomplish the fabrication of a part.

A discrete number of planned operations are identified by each process plan, which together represent the standard process to be used to fabricate a part.

Entity Class Synonyms: Planned Operation, Manufacturing Instruction

Key Classes: Process Plan No., Line No.

Owned Attribute Classes:

Name: Line Number

Definition: A sequential number on a process plan that identifies the specific planned manufacturing

operation to be performed.

Name: Planned Manufacturing Operation Description

Definition: The identification of the work callout of a planned operation (i.e., saw, shear, paint, etc.).

Name: Planned Manufacturing Operation Set-up Time

Definition: The time allotted to prepare material, equipment and/or tools prior to commencement of work

identified by a planned manufacturing operation.

Name: Planned Manufacturing Operation Run Time

Definition: The time allotted to perform the work identified by the planned manufacturing operation subsequent

to set-up.

Name: Planned Manufacturing Operation Sequence Number

Definition: A number used to identify the order of work to be performed among planned operations on a manufacturing order.

NODE: MFG/E421 (G1) TITLE:

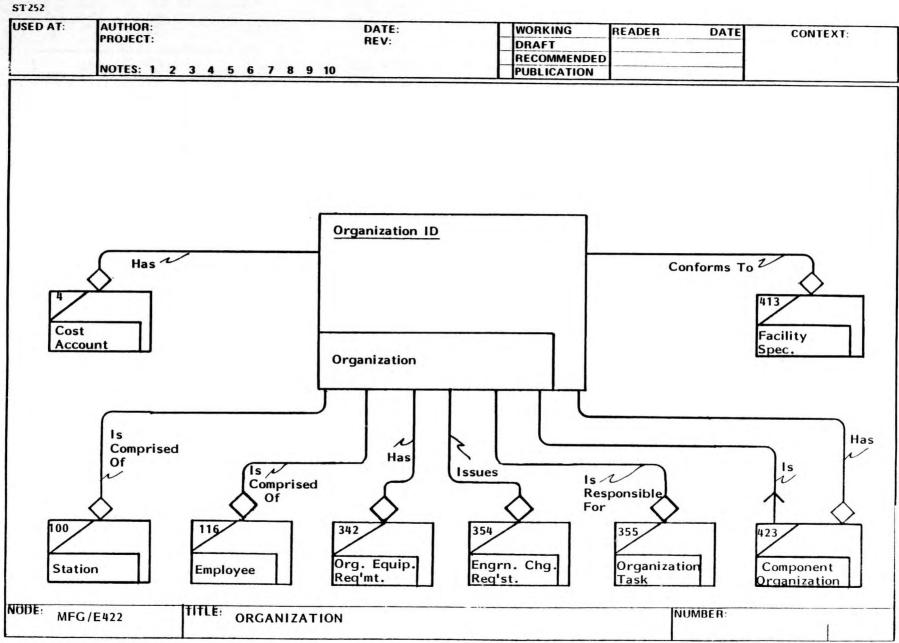
GLOSSARY:

PLANNED MANUFACTURING OPERATION

NUMBER:

749

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | | |
|----------------------------------|---------------------------|------------|--------------------------------------|------------|--|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name: | | |
| Process Plan No. Organization ID | Process Plan Organization | 415 422 | Process Plan Station | 415 100 | is comprised of performs | | |
| Station No. | Station | 100 | Station | 100 | performs | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1 | | | | | | | |
| E: MFG/E421 (G 2) | TITLE: GLOSSARY: PLANN | IED MANU | FACTURING OPERATIO | NUMBÉ | R: 750 | | |



3-60.

Key Classes: Organization ID

Owned Attribute Classes:

Name: Organization ID Definition: An identifier which uniquely identifies each organization. **Attribute Migration Path** Inherited Attribute Class Owned By: Inherited From: Attribute Class(es) Inherited Through: Relation Class Name; **Entity Class Name** Number Number **Entity Class Name** NODE: MFG/E422(G1) TITLE: NUMBÉR: **ORGANIZATION**

Entity Class Definition: An organizational unit of the company with specific functions and responsibilities.

| ST 252 | | | | | | | | | | | |
|----------|-----------------------------------|----------|----------|-------|---|-----|--|--------|---------|--------|----|
| USED AT: | AUTHOR: PROJECT: NOTES: 1 2 | 3 4 5 | 6 7 8 9 | 10 | DATE: REV: | F | WORKING DRAFT RECOMMENDED PUBLICATION | READER | DATE | CONTEX | T: |
| NODE: NE | | | | | Organization ID Organization Is anization ID, Organization | Ha: | s | | | | |
| MFC | G/E423 | TITLE: (| COMPONEN | T ORG | ANIZATION | | | N | IUMBER: | | |

8 September 198

Entity Class Definition: An organizational unit of the company which is subsidiary to another organizational unit.

Key Classes: Organization ID, Organization ID

| Inherited | Attribute Class Owned By: | | Attribute Migration Path | | | | |
|----------------------|---------------------------|---------|--------------------------------------|--------|--|--|--|
| Attribute Class(es) | Entity Class Name | Number | Inherited From: Entity Class Name | Number | Inherited Through: Relation Class Name; | | |
| Organization ID | Organization | 422 | Organization | 422 | is | | |
| Organization ID | Organization | 422 | Organization | 422 | has | | |
| | | | | | | | |
| DDE: MFG/E423(G1) | TITLE: GLOSSARY: COM | MPONENT | ORGANIZATION | NUMB | ER: | | |

ARCHITECTURE PART III - Final Report DOCUMENT REQUEST ORDER FORM

| AFWAL-TR-82-4063 VOLUME II - Procedures FFWAL-TR-82-4063 VOLUME III - Composite Function Model of "Design Product" (DESO) VOLUME III - Composite Function Model of "Design Product" (DESI) VOLUME IV - Composite Function Model of "Manufacture Product" (MFGO) FFWAL-TR-82-4063 VOLUME V - Composite Information Model of "Manufacture Product" (MFGO) VOLUME V - Composite Information Model of "Manufacture Product" (MFGO) VOLUME V - Composite Information Model of "Manufacture Product" (MFGI) VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) VOLUME VII - MFGOI Glossary VOLUME VII - MFGOI Glossary VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT Document(s) requested for the purpose of (intended use and program/project application must be provided): | SUBMIT DOCUMENT REQUESTS TO: AFWAL/MLTC ICAM Program Library Wright-Patterson AFB | OH 454 33 |
|--|---|------------------|
| AFWAL-TR-82-4063 VOLUME II - Architecture Part III Accomplishments () AFWAL-TR-82-4063 VOLUME III - Procedures (FWAL-TR-82-4063 VOLUME III - Composite Function Model of "Design Product" (DESO) () FWAL-TR-82-4063 VOLUME IV - Composite Information Model of "Design Product" (DESI) () FWAL-TR-82-4063 VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) () FWAL-TR-82-4063 VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) () FWAL-TR-82-4063 VOLUME VII - MFGO1 Glossary FWAL-TR-82-4063 VOLUME VIII - Technology Transfer () NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: STATE: ZIP: | | |
| VOLUME II - Procedures () VOLUME III - Composite Function Model of "Design Product" (DESO) () FWAL-TR-82-4063 VOLUME IV - Composite Information Model of "Design Product" (DESI) () FWAL-TR-82-4063 VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) () FWAL-TR-82-4063 VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) () FWAL-TR-82-4063 VOLUME VII - MFGO1 Glossary FWAL-TR-82-4063 VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | VOLUME I - Architecture Part III A | |
| VOLUME III - Composite Function Model of "Design Product" (DESO) VOLUME IV - Composite Information Model of "Design Product" (DESI) VOLUME IV - Composite Information Model of "Design Product" (DESI) VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) VOLUME VII - MFGO1 Glossary FWAL-TR-82-4063 VOLUME VIII - Technology Transfer VOLUME VIII - Technology Transfer PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | VOLUME II - Procedures | () |
| VOLUME IV - Composite Information Model of "Design Product" (DESI) FWAL-TR-82-4063 VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) VOLUME VII - MFGO1 Glossary FWAL-TR-82-4063 VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | FWAL-TR-82-4063 | () |
| VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) () FWAL-TR-82-4063 VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) () FWAL-TR-82-4063 VOLUME VII - MFGO1 Glossary FWAL-TR-82-4063 VOLUME VIII - Technology Transfer () NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | FWAL-TR-82-4063 | () |
| VOLUME V - Composite Function Model of "Manufacture Product" (MFG0) VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) WAL-TR-82-4063 VOLUME VII - MFG01 Glossary VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | FWAL-TR-82-4063 FWAL-TR-82-4063 | () |
| VOLUME VI - Composite Information Model of "Manufacture Product" (MFGI) () WAL-TR-82-4063 VOLUME VII - MFG01 Glossary () WAL-TR-82-4063 VOLUME VIII - Technology Transfer () NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: STATE: ZIP: | VOLUME V - Composite Function Model of "Manufacture Product" (MFGO) | 1 |
| VOLUME VII - MFG01 Glossary WAL-TR-82-4063 VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | VOLUME VI - Composite Information Model of "Manufacture D | |
| VOLUME VIII - Technology Transfer NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | VOLUME VII - MEGOI Classon | () |
| NAME: PLEASE PRINT MAIL CODE: TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | WAL-1R-02-4U03 | () |
| TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: REQUIREMENT FOR DOCUMENT | DI FACE MANUA | () |
| TITLE: PHONE NUMBER: DEPARTMENT: COMPANY: STREET OR P.O. BOX: CITY: STATE: REQUIREMENT FOR DOCUMENT ZIP: | NATIL: | |
| CITY: STATE: ZIP: | DEPARTMENT: | |
| REQUIREMENT FOR DOCUMENT ZIP: | STREET OR P.O. BOX: | |
| | STATE: | IP: |
| | | applica- |
| | | |
| | | |
| | | |
| | | |